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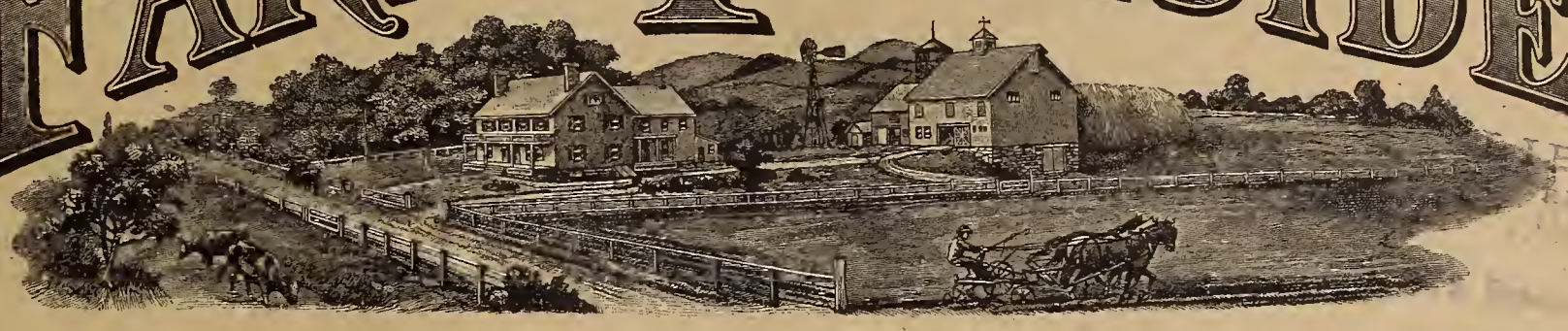
FARM AND FIRESIDE



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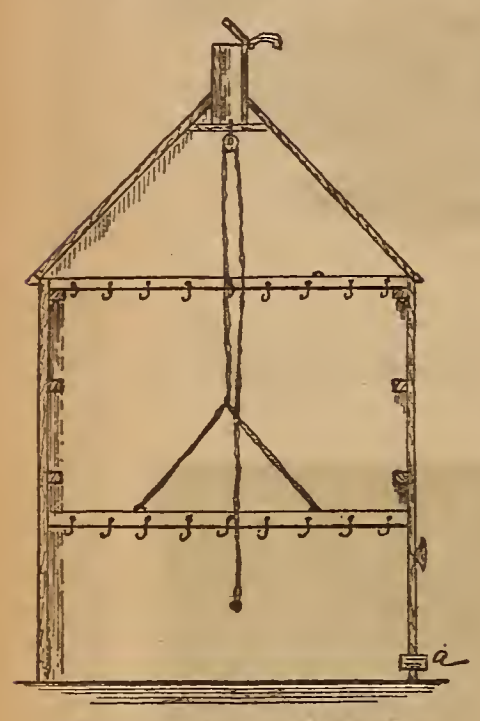
PRESIDENT ROOSEVELT'S JERSEYS IN A SHADY LANE

A SMOKE-HOUSE CONVENIENCE

A METHOD of hanging the meat in a smoke house without reaching up or using a ladder is shown in the accompanying illustration. The smoke house may be of any shape, but it should be provided with cleats fixed to the sides, upon which the hanging bars rest.

A pulley is fitted inside to the top of the building, and a hoisting rope is passed over it. The hanging bar is fastened to the rope by two spreading ties, so that it will not easily tip when loaded. The hams or meat are hung upon the hooks



SMOKE-HOUSE CONVENIENCE

fixed in the bar, and the whole is hoisted to the cleats, when the bar is swung around so that the ends rest upon the cleats. The rope is then released from the bar by means of a small rod, and another bar may be loaded and raised in the same way.

The door marked A is used to fix fire. The wire outside is used to regulate the draft. J. E. BRIDGMAN.

THE OLD AND THE NEW WAY

"Growing corn now is no more like it was twenty years ago than running a steam engine is like driving a stage coach," said a farmer, who is now sixty-five years of age and still in the active list. "I actually feel ashamed to own that we followed such methods. We first turned all the soil away from the plants and piled it up between the rows, then we turned it back again as soon as the plants were sufficiently high that they would not be covered. It's a wonder they ever got high enough, standing on little narrow ridges, as they did. We finished the cultivating by banking the plants five to eight inches high, leaving great furrows between the rows. No wonder we considered fifty bushels an acre a good crop in those days. We worked ourselves and teams hard to grow what we would now consider a medium crop.

"Now, with the improved corn and our light-running cultivators, we count eighty to one hundred bushels an acre a good crop, and less than sixty bushels a very ordinary crop. We sit on our cultivators and cultivate shallow or moderately deep, as the soil and plants seem to require, changing the depth as we go, by simply moving a lever. Instead of ripping the soil up deeply two or three times in a season, we cultivate the surface six or seven times, keeping a mulch of loose soil over the roots without disturbing them, destroying all weeds in the seed leaf, and aerating the soil and making the nitrogen in it available to the plants, besides keeping a nearly level surface over all the field.

"Good farming is scientific these days. We no longer do things by main strength and awkwardness, but by the application of the latest discovered principles in mechanical science. I used to regard myself and all other farmers as serfs of the soil—next thing to brawny animals. Now I look upon a good farmer as a skilled engineer. The farmer will become a more important factor in the business and political world when he refuses to be the prey of every little retail dealer in the land, and declines to become the tool of political bosses, promoters and mountebanks."

This man has reached the age at which the farmer usually is found with knotted hands and rheumatic frame, retired to a life of miserable idleness, filled with complainings and tiresome reminiscences. But here we find a man, and the number is increasing, who is actively farming because he takes delight in it, because he can produce so much better crops and so much easier than in his young days. Furthermore, he has kept himself thoroughly informed on what is being done in the world, and especially in agricultural lines, and he is neither wearisomely reminiscent nor cranky and garrulous. He is a good example of what a farmer may be if he keeps in the front rank of his calling. Men like him do not scare the boys from the farm, they rather attract them to it, because they show what the land, properly handled, can be made to produce, and that the farmer can be as intelligent, alive and up to date as any business man on earth.

His reference to the farmer refusing to be the prey of every little retail dealer in the land is good. He probably objects to the efforts of the Retail Dealers' Association to compel farmers to support retail dealers in the little towns by preventing them from obtaining goods of any kind from any other than them. This association is the most arrogant trust ever formed. Almost all retail dealers are connected with it in some way, and its avowed purpose is to prevent consumers from procuring merchandise at prices below theirs. It is a bitter opponent of a parcels post in this country similar to that enjoyed by the people of every other civilized country on the globe.

A congressman from an agricultural district in Illinois stated recently that he and others would make it "hard sledding for the Postmaster General's parcels post bill if he poked it into the House." He is interested in sundry retail stores. He was elected by the votes of farmers, whom the parcels post would benefit more than any other class.

When farmers decline to be the prey of the retailers' trust such men as he will not get into congress. In defense of his position he declared that parcels post is desired only by the catalogue houses in the large cities. I asked quite a number of people who deal with catalogue houses whether these firms had sent them any written or printed matter about a parcels post, and all said they had not. But they had sent matter to all of them urging them to buy in not less than one-hundred-pound lots, because the railroads charged the same amount for a twenty-pound shipment as one of a hundred, and for this reason they always added enough groceries, such as sugar and other articles usually bought at the village store, to make the order a hundred pounds weight. The saving on these heavy goods would just about pay the freight on the lot.

To prevent farmers from obtaining goods from the catalogue houses the Retail Dealers' Association will have to work some hocus-pocus with the freight rates. But this arrogant, hold-up trust will have to go the way of all similar organizations. In a short time this will be a government of the people for the people, and no hold-up organization will be permitted to exist. FRED GRUNDY.

REPAIRS COME HIGH

It happens every little while in the course of the year that we need some repairs—for furnaces, stoves, farm machinery, etc. This fall I found a slight break in one of the castings belonging to my greenhouse heater. All that was needed consisted of less than half a dozen pounds of iron castings, and I had to order them from New York City. I got the goods all right; but including the express charges these common castings cost me about three dollars, or at the rate of about fifty cents a pound. This seems a rather stiff price to pay for cast iron. The toll exacted by the express company had nearly doubled the original cost.

A near friend of mine has a cook stove that was manufactured in Philadelphia. When he sends for repairs he simply encloses a one or two dollar bill (whichever he thinks will surely cover the amount of the bill), thus saving not only the expense of making remittance, but time and correspondence as well. He receives his change back with the advice of shipment. There is invariably a "kick," however, about the size of the express charges. He always feels like paraphrasing a popular saying or song by asking, "How would you like to be the expressman?"

How much better are the express companies than the feudal highwaymen and robber barons who a few hundred years ago used to waylay and rob the traveling tradespeople? These modern "agents of the road" do the same trick, with the sanction of the law and of the government. That is about the only difference, except, perhaps, that the express companies do the job more thoroughly. They rob every one, whether he travels or not.

How we do long and sigh for that packet post which has been dangling before our covetous eyes so long—hope inspired and hope deferred. How much longer is it to remain a tantalizing "fata morgana?" Porter, of good old cow fame, is in Washington. In any measure so earnestly desired by the American farmer we can probably depend on him. But will we ever be able to get at the United States Senate?

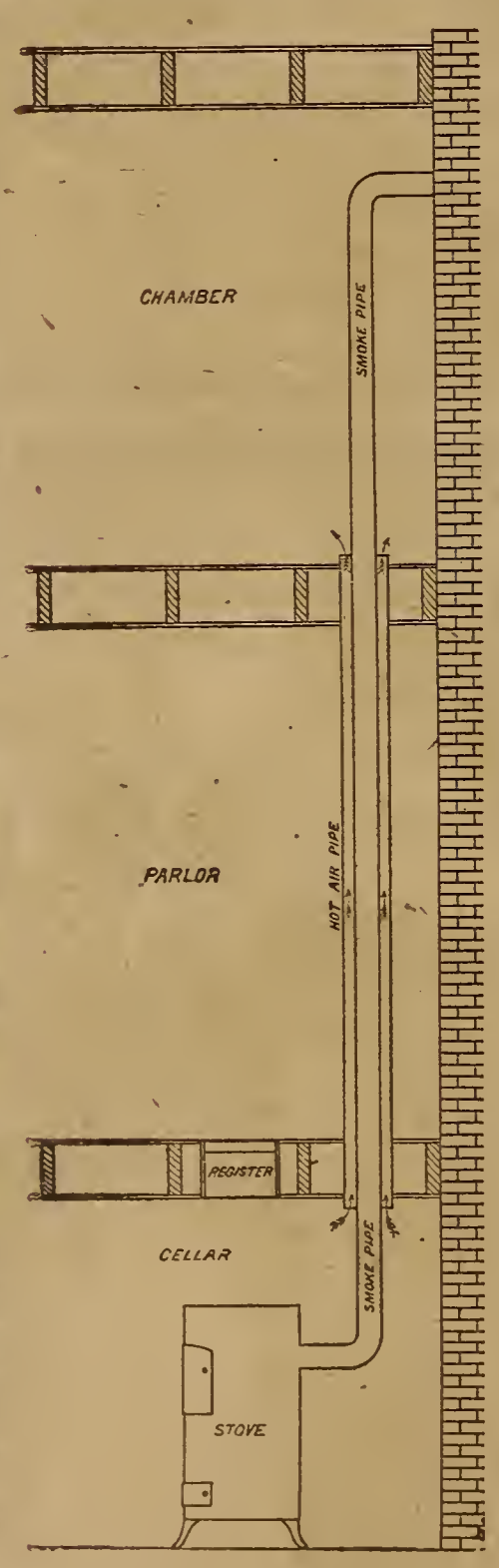
In the meantime, however, when we have to purchase machinery, tools, stoves, etc., we will do well to bear the future need of repairs in mind. I want standard makes, and buy them from the nearest manufacturer that I can get them from advantageously, so that I am sure I can get the repairs when needed, and without having to order them at long range.

T. GREINER.

SAVE MONEY BY SAVING HEAT

The usual way to place a furnace or heating stove in a house is to crowd it close to the chimney and to connect it with the smoke flue by a short piece of smoke pipe. What happens when a fire is started in a furnace or heating stove placed close to a chimney? The burning fuel creates a great volume of hot gas, mingled with hot air, and the custom is to lead this to the chimney as quickly as possible to get rid of it, as the gases are poisonous if allowed to escape into the house. This mixture of hot gas and air radiates heat through the walls of the stove or furnace and from the little piece of smoke pipe, and this heat of radiation warms the house. When these gases enter the chimney the radiation of heat into the house stops. A thermometer placed on the smoke pipe shows that, even with a very moderate fire, the gas and air inside the pipe may be very hot indeed, or from three hundred to four hundred degrees. The instant the gases enter the chimney all this high heat is lost.

Can it be saved? Can this heat be used to warm the house, and how? The accompanying diagram shows a small stove used as a hot-air furnace in a dwelling house in Connecticut. At the right is the chimney extending from the floor of the cellar to the top of the house, and passing through the first and second or chamber floor and through the attic to the ridge pole. The smoke pipe, instead of going direct to the chimney, turns after leaving the stove and goes upward through the parlor and through the chamber and through the two floors, up to the ceiling of the chamber, and then it turns and enters the chimney. Outside of this pipe is a larger, sheet-tin pipe extending from just below the ceiling of the cellar to just above the floor of the chamber, and open above and below. What happens when a fire is started in this stove? The hot gases and hot air and smoke fly swiftly upward through the parlor and chamber in a black sheet-iron smoke pipe. We try the thermometer on the pipe in the cellar, and find the pipe is very hot, or three hundred degrees. We try the thermometer on the pipe in the chamber, and find it is only one hundred and twenty-five degrees. What has become of the one hundred and seventy-five degrees of heat? Is it lost? No, it was radiated through the pipe into the air of the chamber. The outside pipe being eight inches in diameter and the smoke pipe six inches, there is an annular space between the two pipes, and all the heat radiated from the smoke pipe goes to warm the air between the two pipes. Being heated, it expands, and as the space is open above, it rushes out into the chamber in a swift stream of hot air. As it moves up, cool air flows in from below, is warmed, expands, and rises into the chamber. Hold the thermometer at the top of the pipe and it shows that the hot air pouring out of this air space registers one hundred degrees. What, then, became of the seventy-five degrees? It is again radiated through the large pipe into the parlor, and helps warm that room. All of this heat, which warms the two rooms, is clear gain, and reduces the cost of warming the house and saves money in buying coal. Without this contrivance a second stove and another fire would be necessary to keep the chamber warm. Moreover, such a heat saver is perfectly safe, and if properly made will not leak gas.



SAVING HEAT

The diagram is so simple that any one can easily construct a similar heat saver in connection with a furnace, a parlor stove or a cook stove. The contrivance cost ten dollars, so that a second room is warmed at only the cost of the interest on the ten dollars, or forty cents a year. If preferred, very good contrivances for saving heat and warming a second room from one fire can be purchased for about seven dollars, and can be installed by your tinman for a dollar or two. Of course, such appliances are not pretty, but they can be easily hidden behind a screen.

CHARLES BARNARD.

WHY SPREAD MANURE THIN?

When an observer considers the lightest application of barnyard manure that can be applied with a spreader he is likely to wonder how so little plant food and such a comparatively small amount of humus can effect a benefit to the crop quite equal at times to a much heavier application of the manure. This raises a point that is likely to escape notice by some—that is, the bacterial influence of manure. An apple or potato that decays in a barrel often causes several others to rot by coming in contact with them; so in the soil, the bacteria not only work upon the manure itself, but seem to have a decomposing influence upon the inert soil particles immediatly surrounding the manure. This would indicate the advisability of moderate applications of manure upon as large an area as possible, and that the sooner the manure can be put on the ground, the better, so as to secure the benefit of the entire period of decomposition directly in contact with the soil. GEO. P. WILLIAMS.

NEW SAWS AND FRESH FILINGS FOR FARMERS

A "good" farmer always works at his trade.

The early farmer catches the first rays of sunshine.

When money talks, the farmer listens and his crop answers.

Let there be beauty along the path "between you and the gate post."

If you turn over a new leaf this year, memorize what is on it and forget not.

In filling your sheepfold, remember that two sheep heads are better than one.

One of the hardest crops in the world to raise is a good crop of common sense.

The man who puts on his company manners at home need not be ashamed of his home manners while in company.

The man who puts in his time getting the best out of his farm will find the market waiting for the best he has to offer.

There is a time to plow and sow, and all of the crop be tending;
There is a time to reap and sell, and part of the money be spending.
He that by the plow would live,
Much time to farm life must give.

In the great book of Nature every farm is a chapter, every field a leaf, every truck patch a paragraph, every corn row and wheat row a line, every farmer a writer, and the rest of the world interested readers. WILLIAM J. BURTSCHER.

TREE PLANTING BY BEE KEEPERS

THE honey secured by the bees from a basswood tree in a good season has been estimated as fifty pounds. If such results could be secured nearly every season it would pay to plant basswoods for honey alone. It being otherwise, the apiarist must seek for other sources when encouraging the setting out of trees for honey.

Thousands and thousands of shade trees are planted every year; if a large number of them yielded nectar, the honey yields in many an apiary would be materially increased. With this object in view, every apiarist should select shade trees that yield honey and encourage his neighbors to make the same choice.

There are quite a number of different kinds of honey-yielding trees that are excellent for planting along the roadside and where they will protect buildings from the heat of the sun.

Whitewood (Liriodendron Tulipifera) is a quick-growing tree that is catalogued by most nursery firms among the list of shade trees. It is also called tulip tree, perhaps from its tulip-shaped flowers. The buds open in April or May, according to location. The honey is of dark color, but as the trees blossom after fruit bloom, at a time when the bees in many localities would not have any nectar to gather, it is of great importance in keeping up brood rearing, so that the hives will be filled with workers when the main flow from white clover commences.

There is another tree that blossoms so as to fill the gap of nectar dearth between fruit bloom and white clover. I refer to locusts (Robinia pseudacacia). They appear to be in less favor as shade trees now than in former years. This perhaps is because they become ill shaped as they grow older, if not properly pruned.

Reference has already been made to basswoods. On account of their naturally wide distribution, more honey is secured from them than from any other tree. With their large, dark green leaves and the bell-shaped flowers that emit an exquisite perfume, and their symmetrical form, they make stately shade trees, too. They are largely used for this purpose, but in some localities where they do not grow naturally, few of them have been planted as yet. Here is where beekeepers should set an example, by planting them themselves. They are quick growers. If the soil is sandy or dry they do not do well. They make the quickest growth and yield the most nectar on a medium moist and fertile soil.

Wherever basswoods grow well, preference should be given them to any other tree for honey, and as shade trees, too, because they yield honey (nectar) more profusely than any other tree or plant, and the virgin white appearance of combs of basswood honey makes them bring the highest price in most markets.

A family of trees suitable for California and states along the Gulf Coast, is the eucalyptus. They are not indigenous, but were imported from Australia. These trees, on account of their rapid growth, have been planted in large numbers in California. The bee keepers of this state, as well as those of the natural home of the eucalyptus, are unanimous in their praise of the nectar-yielding qualities of these trees.

The seeds of eucalyptus are easily grown, and in six weeks the plants are large enough for transplanting. For a series of years the rate of growth of one species in California has been found to be nineteen inches a month. On account of shedding their leaves the season through, they are considered undesirable as shade trees. They are being planted for their commercial value in California.

F. A. STROHSCHEIN.

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THE FARMER'S HIGHWAY TO SUCCESS

The business vocation which a man has is not simply his means of getting a living, but is his part of the world's work. Each vocation from farmer to manufacturer constitutes a part of the world's machinery. Only when all the parts are perfect will the business world be prosperous. When labor, thought and honesty are linked together in every branch of our industrial life we shall have less friction in the machinery and more gold in our pockets.

There are many avenues that lead to the farmer's highway of success, and he should travel that one best suited to his inclination. To succeed he must be thoughtful, persistent, ambitious, and, above all, honest. He must understand that the thought (gained by experience) coiled up in his head is the mainspring of his business.

The American farmer is a better business man to-day than he was ten years ago, but he has many lessons yet to learn. The average farmer must generally commence his business with a limited amount of means, hence he should not be superstitious about debt.

Do not understand me to teach or practise the credit system as being absolutely essential to the farmer's highway to success, as debts so greatly differ. To go in debt for productive property is one thing, and to go into debt for unproductive property is another thing.

To buy land for less than it is worth, to buy stock to feed on the farm, to make needed improvements, to hire labor, to save that which is going to waste, to buy improved machinery that saves expense—these things are business debts, debts that are a source of profit.

But for the farmer to run in debt for fast horses, for stock that he does not understand, for enterprises over which he has no control, for costly buildings, and last, but not least, for costly vehicles, musical instruments, furniture and wearing apparel, that his family may move in the circle usually called the social circle, which regards these things only—these are the eggs from which are hatched disappointment and dishonor; these are the debts that cornice the homes with financial despair.

When credit is used, let it be in a straightforward, business way; store debts and floating debts are a nuisance. The farmer who forces a merchant to carry him generally gets a rough ride.

The farmer has no business to force the men with whom he deals to carry him. He can borrow where they make a business of loaning, and clear up his scattering accounts and redeem his papers at the proper time.

A man can contract one debt which never can be paid—a debt which is incurred when his judgment goes into bankruptcy and he goes into any business in opposition to his own taste. It is hard enough to win success in any calling when the whole bent of a man's mind is in the direction of his business. It is doubly hard when the mental drift is the wrong way. "Be what Nature intended you for, and you will succeed. Be anything else, and you will be worse than notning."

The farmer who grows a crop should estimate the cost as carefully as an architect who plans a building counts its cost; by so doing he may know just what he is making. Crops should be grown not as the result of jerky impulses, but of careful calculation. The farmer will then know just where his money comes from at the end of the year; if he is financially sick he can tell what part brought on the disease.

The man who keeps a cash account thinks twice before he spends his money, and if he is a successful farmer he will spend thoughtfully what he gets laboriously. The obligations of citizenship should make every farmer active in politics not for the good of his class alone, but for the good of the whole country. It is not good citizenship for the farmer to stay away from the polls for the lack of time, and then spend his time bewailing the result of the election. Some men say they do not like to meddle in politics because the atmosphere of political life is full of moral poison. Will the political atmosphere become purer by the absence of good men? The farmer who is a good citizen will never be oppressed with that nightmare of nonsense which pictures all tillers of the soil as carrying the burdens of the world. The good citizen respects the rights and virtues of all classes and does not magnify those of his own.

The successful farmer will never call anything good enough which can be better; he will occasionally be looking and working for better crops, better soil, better stock, better buildings and a stronger sense of justice. He should love his vocation; he should carry into it enthusiasm backed by faith; he should be broad in charity, strong in his friendly sympathies for classes; he should be loyal to himself, loyal to his family, loyal to his country, and, above all, loyal to the truth.

This nation of ours, with its laws, its mills, its factories, its institutions, its beautiful cities, its forests, its millions of cultivated acres, its happy homes, its wealth of matter and its wealth of mind, is a living monument to the business ability of those men who, in an early day, came here to make for themselves homes in the Western wilderness.

R. B. RUSHING.

TWIG OF BASSWOOD IN BLOOM

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RIGHT WHERE YOU ARE

"I would like to get into farming. Would you advise me to go out to California or the western coast somewhere and start in?"

That is the question that comes to me frequently; and I feel sure that the persons who ask it cannot possibly be more serious in the asking than I am in the answering. So much depends on the man, his wife, and his present condition and experience.

As a rule, however, I believe it is best for men to begin right where they are. Now suppose we have a young man that has been brought up in Ohio. He has worked on Ohio farms. All the experience he has ever had has been on Ohio farms. The same way with his wife. They both have a fair knowledge of the crops, the conditions and the life of Ohio. They intend to get a hold on farming for themselves.

For these young people to pull up and move away across the country to a new home about which they know little or nothing would be unwise, it seems to me. To such I would say, begin right where you are. Here you have friends that will love you and lend you a hand in times of trouble. Here you are acquainted with the methods of farming. Here you surely will make a success if you go about your work with energy.

You never will find a country that has not its drawbacks as well as its advantages. That is certain. Many times we forget this. We think only of the advantages to be had in the new country. Those who try to induce us to pull up and move away have an interest in keeping us from knowing anything about the disadvantages. But sit down and write to some one that has been in the new country, or sit by his side an hour or two and have a heart to heart talk with him, and you will soon see that the sunny side is often hidden under clouds, the same as it is right where you are. It is an easy thing to dream. Most always one may sell his farm and move away. The railroads are burdened with people hunting for new homes. There is a spirit of restlessness in the heart of man, at best. We are all pilgrims, seeking a city not made with hands. Do the best we can. This world is ours only for a little while. To-morrow we will be away.

It stands us in hand to make the most of ourselves and of our advantages while we are here. Almost always we may do this to the best advantage just where we are.

Sometimes it is a good thing for the man that thinks of going to some distant part of the country to take a trip that way alone, before he takes his family or makes any decisive move to dispose of his present home. More than one young man has done this and come back better satisfied than he ever would have been otherwise. He sees that the bright spots are not all in one place. Everywhere you go there are things to enjoy and to worry about.

Or, it may be some one we know is already out in the other part of the country. A letter from him, in which he states the exact facts, would be of untold value.

Of course, there may be circumstances when it is advisable for one to branch out. I do not say that there are not; but as a rule the more content we are to stay where we understand the situation best, the more wisdom we show.

EDGAR L. VINCENT.

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THE SOIL, MAN'S BEST HERITAGE

Nothing tends more to uplift man and make him independent in thought, feeling and patriotism than the direct ownership of his rightful share of the soil. The gifted Edward Everett has well said: "The man who stands on his own soil, who feels that, by the law of the land in which he lives, he is the rightful and exclusive owner of the land which he tills feels more strongly than another character of a man as the lord of an inanimate world. Of this great and wonderful sphere, which, fashioned by the hand of God, and upheld by His power, is rolling through the heavens, a part is his from the center to the sky. It is the space on which the generation before moved in its round of duties, and he feels himself connected by a visible link with those who follow him and to whom he is to transmit a home."

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Review of the Farm Press

FARM PROFIT AND INCOME

STATEMENTS from forty-seven farms, as averaged by F. W. Card, showed an average net profit for the owner of a little over one thousand eight hundred dollars. They were located in various parts of the country and were, of course, much above the general average of farm success. The figures include what is left of the farm receipts after deducting interest on the capital, also five per cent for depreciation and insurance and ten per cent for depreciation of teams and tools, besides the running expenses for the farm.

The figures were given as showing what might be looked forward to by young farmers as a standard of successful agriculture. A young man well equipped for the business, alert and ambitious, might fairly hope for an income equal to the figures given.

Yet it remains true that the general run of farm incomes is considerably less. According to figures given out by Secretary Hamilton of the Pennsylvania Department of Agriculture, the average Pennsylvania farmer's family receives a little less than two hundred dollars for each member of the family, and after paying the living expenses, a surplus of about seventy-three dollars for each member of the family. We thus have the average income in a fairly prosperous state, and also the exceptional income of farmers whose ability has enabled them to obtain success above the average.

Comparing these figures with the general use of other pursuits, it will be seen that farming occupies a middle ground in regard to income. Even for the so-called successful farmers the receipts are hardly equal to those of the successful merchant. On the other hand, the general average is above that of the working class. Thus in Pennsylvania the surplus for each member of the family is seventy-three dollars, compared with a similar surplus of only thirty-nine dollars for each member of the family engaged in other pursuits in the state. The difference is even more favorable for the farmer's family than indicated, because the cost of living expenses is probably less than the farm, owing to obtaining many products at first hand, and the real deduction for living expenses is probably less than the figure by Secretary Hamilton.

Even in the so-called higher occupations and professions, although the expense of preparation is much greater, it does not always follow that the income is greater. The average salary of teachers in Massachusetts is about six hundred dollars. Some years ago the president of the Massachusetts Institute of Technology stated that the average salary of the graduates of that institution was only about six hundred and fifty dollars. It is not hard to find many clergymen and doctors who are earning not more than six or seven hundred dollars. For certainty of income the farmer's living is far superior. Once established in business he is practically sure of a living for the rest of his life, while in other occupations the fear of hard times and the uncertainty of employment is always a source of drawback and worry.—The American Cultivator.

FENCE MATERIALS

There was a time when the question of farm fences was not a large one. Fence material was abundant and cheap and the farmer cut a large part of the posts from his own land. There were sawmills in almost every part of the country where timber was to be found and where the land sloped enough to give a fair head of water by which to run the mill. The young trees were cut down and made into posts, and six-inch boards were nailed onto them. When the boards rotted off new ones were purchased. What little wire was introduced met with no encouragement from the farmers.

But the conditions have changed greatly in forty years. I well remember the first wire fence I ever saw. It was over forty years ago, so we see that even at that early day the idea of using wire for fencing had begun to take hold of the people. That wire fence was a novelty to the community in which I lived and was the only fence of that kind of which the people there had ever heard. It consisted of two strands of wire, each wire being about one eighth of an inch in diameter. The posts were perhaps thirty feet apart and the wires were not very taut.

They were not then coated with material resisting the attacks of rust, and so were always the color of iron rust. The only objection any boy had to crawling through the wires was that he would get his hands and clothes stained. I do not know how the cows felt about it, but I doubt if they would have felt the wires very confining. The fence was erected around a great alder swamp, and I never remember to have seen cows pastured there.

The days of high-priced materials have come now, and also the day of high-quality materials. The fence wire is now made so that it will not rust, no matter how much the winds and the rains may beat upon it. The high price of wood has made it out of the question to use boards, and good wire has taken their place. The price of wire has advanced some, but nothing in comparison to the advances reported in the value of lumber during the past few years.

The farmer is now getting into the idea of growing his own fence posts and buying wire. The many kinds of good wood that can be grown to fence-post size in a few years makes it very feasible for this to be done. I know one man who several years ago planted the seed of elm trees about four feet apart on a big lot. He now has a good grove of elm trees, all of them large enough for fence posts. By growing them so close together all the limbs are small and the growth has gone into the trunks. At four feet apart, about twenty-five hundred posts are growing to the acre. That is a pretty good purpose to put land to in these days when posts are high, even if the land is quite high in price.—Albert Poole in The Farmers' Review.

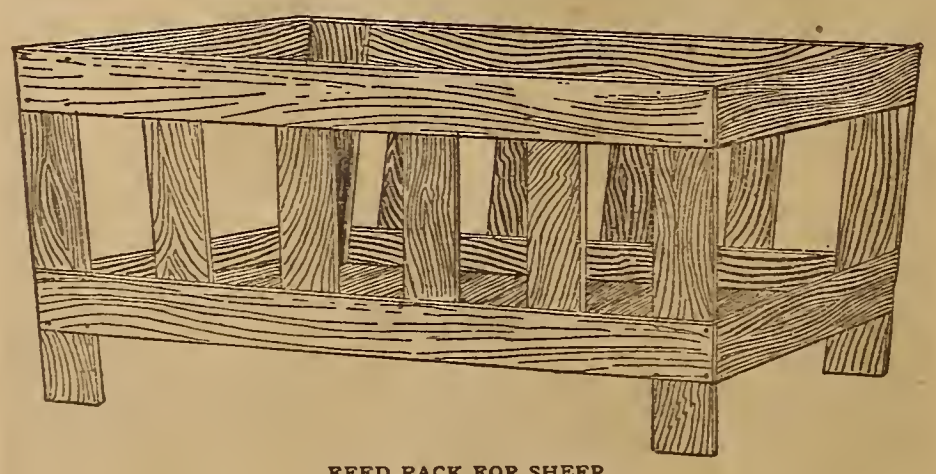
A GOOD SHEEP RACK

This illustrates what I consider to be the best sheep rack, and here are a few reasons why I have found it so. In building it I make the top a few inches wider than the bottom, so that the sides will flare slightly; then the bottom I make perfectly tight, and have the lower side pieces joining it come two inches above, so as to form a tight box at the bottom two inches deep. The corner pieces I let project six inches below the rest, so as to form legs for the rack to rest on.

Now here are the rack's advantages: The flaring sides serve to hold the fodder in the rack better and also give the sheep a chance to reach up as well as into the rack when eating.

The tight bottom serves to catch all leaves that always break off when clover or other such fodder is fed, and in a rack without the tight bottom are always wasted when they drop to the floor and get more or less of the odor of the manure about them. Then, when grain is fed, one can sweep out the rack, and it serves the purpose of a grain trough, also.

Lastly, the legs serve to keep it up above the floor and away from the manure, so that the sheep cannot work the soiled litter between the slats with their feet. It has only one disadvantage that I know of, and that is, it will tip over. But this I overcome by placing one end of it against the side of a building and fastening it so that it is stationary.—L. D. Huffman in The National Stockman and Farmer.



FEED RACK FOR SHEEP

CORN COBS AND CORN STALKS

Among the least valuable of the by-products of the farm are corn cobs and corn stalks—that is, the stalks without leaves or husks. Although these are among the least valuable of the by-products, it is well for the farmer to know what their value may be, and how best to handle them.

So far as the manurial value is concerned, a ton of corn cobs in an air-dried condition contains about two pounds of nitrogen, .4 of a pound of phosphorus, 6.8 pounds of potash. It will be seen, therefore, that the main manurial value of corn cobs is in the potash which they contain. Corn stalks have about twice as much nitrogen as the cobs, a little more phosphorus and a little less potash. In addition to this, corn stalks contain considerable humus material in much better shape, because more easily decayed than corn cobs.

The best use that the farmer can make of corn cobs is to burn them in his hog yard and let the hogs and chickens have what they want of them. By doing this he avoids their interference with cultivation and with the movement of moisture in the soil, on account of the long time it takes them to decay, and at the same time conserves all the really valuable fertility in the cob and has it where it goes direct to the soil.

Besides, where they can be used as fuel, as they can on most farms, they have a very considerable fuel value. A ton, which is about two full wagon boxes with the boards on, is worth one third as much as wood. If wood is worth six dollars a cord, cobs have a fuel value of about two dollars a ton. The ashes can be applied to the fields or to the orchard, or, where this is not desirable, spread over the manure pile. In this way the farmer gets all the value there is in them without any large expense, and with a considerable saving in his fuel bill.—Wallace's Farmer.

ABOUT ACETYLENE GAS

The merits of acetylene are attested by the fact that in the comparatively short time since it was commercially introduced it has come to be used by two million people, counting about two hundred and fifty town plants and more than two hundred and fifty thousand individual house systems. To produce this gas there have been invented nearly five hundred different varieties of generators, sixty-five of which have been passed by the insurance companies as safe and not against the interests of insurance.

Generators are of two kinds—carbide feed and water feed. The difference between these two is one of convenience principally. In the carbide feed the carbide is fed, or dropped from a sealed can, by a feed mechanism, down into a tank filled with water, this contact being all that is required to produce the gas. The water feed reverses this process, the carbide being contained in pans at one side of and detached from the generator proper, and water being fed upon it in a copious stream from the water tank through a pipe. Each works automatically. The gas in each instance is conveyed into a gasometer, which is always in readiness to supply the house service, and the light is precisely the same by either process. Independent table lamps are on the same principle, only smaller. The carbide feed requires water under pressure and large drainage facilities, as, in the case of a twenty-five-light size, at least thirty-five gallons of residuum and water must be disposed of at the time of recharging and fresh water of the same quantity renewed. With ample water and good drainage this is the more convenient type of generator. If water is not piped and drainage is lacking then the water feed is the more convenient, as only a single bucket of water is needed, and a single pan of residuum, mostly dry, is to be disposed of. Recharging is about five minutes' work, once a week, on the average.

All generators which have been passed upon by the National Board of Underwriters are safe, but it is better in every case to install outside of the dwelling, in a frost-proof outbuilding or cave, for the reason that then carelessness or forgetfulness of the few simple requirements of the generator cannot cause gas to issue into the cellar, this being about the only possible source of accidents in connection with the use of acetylene.

Carbide is composed of coke and lime, fused in an electrical furnace. The Union Carbide Company control the patents, and operate mammoth plants at Niagara Falls and Sault Sainte Marie. They maintain warehouses in fifty or more of the principal cities of the United States. Carbide is furnished in one-hundred-pound iron drums at four cents a pound, freight paid. A pound of carbide makes five cubic feet of gas, which therefore costs four fifths of a cent a foot to produce. A twenty-four-candle-power burner consumes one half foot an hour, and therefore costs exactly two fifths of a cent an hour. There is no prospect of the price of carbide being raised. On the contrary, it is possible that competition, which is already seeking a foothold, will cause the price to become lower.—W. G. Nyce in The Rural New-Yorker.

GYPSUM AS AN ABSORBENT

Just how gypsum accomplishes as much as it does is not well established. It is probably through its power to set free potash in the soil. Some years ago, on the relatively new lands of the middle states, sowing "plaster" was the common thing. It was noticed later that it did not have the same effect as formerly, and people complained that the quality was inferior. The truth is that the soil had all the gypsum it could utilize.

As an absorbent in the stables, gypsum accomplishes much because of the fineness of division. It holds much water, and thereby absorbs a good deal of ammonia. It was supposed for a long time that a chemical reaction took place whereby the ammonia was converted into a sulphate, a form which does not so readily evaporate into the air, while the gypsum was converted into carbonate of lime. It is now shown that this action does not take place as much as was formerly supposed. In other words, the fixing power of the gypsum has been exaggerated. While, undoubtedly, much ammonia does escape in a large stable during the day, it is wonderful how sensitive the eye and nose are to small quantities of ammonia. Let loose a gram of ammonia in a big room and note the intolerable stench. A few grams will make a stable unpleasant for a good while.

The best absorbent is, of course, good clean straw and chaff. Mucky loam is not bad if dry when stored; leaves are good; phosphate rock, or better, acid phosphate, is splendid. They will cost something, to be sure, the acid phosphate almost a cent a pound, but it must be remembered that when phosphoric acid is applied to the land it is not like nitrogen, liable to disappear and leave no trace, but will remain in the soil until taken out by growing plants. The sulphuric acid of the phosphate will fix the ammonia otherwise escaping from the stable floors. It is therefore a good absorbent. Gypsum is also good, as noted, but inferior to the acid phosphate. Very often gypsum is spread over manure piles to catch ammonia. It would have to be wet and be kept wet to accomplish much in this matter.—Prof. C. D. Smith, in Country Gentleman.

SUMMARY OF STEER-FEEDING EXPERIMENTS

STOVER VERSUS SILAGE

1. Steers fed corn silage as a part of their ration made better gains than those fed corn stover.

2. The steers fed corn stover ate more grain than those fed corn silage.

3. The cost of the feed was more where corn silage was used as a part of the ration than where corn stover was used.

4. The steers fed corn silage made more economical gains than those fed corn stover.

5. The steers fed corn silage showed a better coat and a more thrifty appearance than those fed corn stover.

BARN VERSUS SHED

The results of this shelter test confirm the conclusions of former years, namely:

1. Shelter has very little effect upon the appetite of the animals except in extreme weather.

2. In this climate it is seldom that the weather is too cold for steers on full feed outdoors, provided they are kept in dry quarters and out of strong winds.

3. It is very essential for fattening steers that they be well bedded.

4. It is decidedly advantageous that the yard be macadamized or given an impervious coating of some kind to prevent mud during soft weather. Wet bedding and muddy yards are more injurious than extreme cold.

5. The amount of feed required per pound of gain is practically the same, whether the steers are kept in a warm basement stable or outside.—Bulletin No. 83, Pennsylvania State College Experiment Station.

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Review of the Farm Press

RAISE FOOD RICH IN PROTEIN

HUNDREDS of dollars are annually spent by farmers for feeding stuffs—bran, shorts, gluten feed, oil meal, etc.—when as a matter of fact money spent for these feeds might be saved if more protein-bearing crops were raised on the farm. The class of commercial feeding stuffs mentioned are purchased, and bring the price they do, because of their protein content. They are valuable feeding stuffs and are needed, especially on the dairy farm where clover, alfalfa or other legumes are not raised to any extent. When corn must form the main portion of the grain ration for dairy cows and for growing cattle, protein-bearing feeds must be fed in connection with it, in order to obtain the most economical results. The farmer who has an abundance of clover or alfalfa hay or of cowpea or soy-bean hay may feed large quantities of corn without supplementing with bran, oil meal, etc.—Farmers' Tribune.

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EDUCATIONAL PUBLICATIONS

FARMERS' BULLETINS, UNITED STATES DEPARTMENT OF AGRICULTURE:—Free upon application to the Secretary of Agriculture, Washington, D. C. These are practical bulletins written by some of the best farm authorities in America. Over three hundred have been issued, each covering a different line of farm work. Every farmer should have a complete set and should have his name on the mailing list to receive new numbers as soon as they are issued.

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Both books free upon application to either your senator or representative in congress, addressing them at Washington, D. C.

EXPERIMENT STATIONS: Write for bulletins on the subjects for which you need information to the Director of Experiment Station.—Colorado College News-Notes.

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THE INDEPENDENT FARMER

The farmer who has a silo is about as independent of the weather as any man can be. Heavy rain, it is true, will prevent the storage of ensilage, but aside from that nothing interrupts this kind of harvesting. Light rains and showers, while making the work disagreeable, do not put a stop to it, and when once in the silo all danger of imperfect curing, which so often injures the crop harvested in the old way, is past, and the feed is in the best possible condition for handling and feeding in all kinds of weather.—Kimball's Dairy Farmer.

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SPECIAL FERTILIZERS

The manufacturers of commercial fertilizers taught the public to believe in the existence of special fertilizers for the various farm crops. They offered, and many continue to offer, "potato" and "wheat" and "corn" brands. Farmers would like to purchase the goods that will pay best in the crop to be grown, and the name of the brand often influences the buyer. If one will compare the analyses of the various special fertilizers on the market he may see that there is nothing in the name. The composition of the goods should depend upon the need of the particular soil rather than upon the supposed need of a particular crop. It is true that some crops demand a heavy supply of nitrogen, and others demand other elements, but no one knows what a fertilizer should carry to a soil until he knows the particular soil.

Where clover sods are heavy or the manure supply is large we escape the necessity of buying much nitrogen. When land is naturally rich in potash, and has organic matter rotting in it, we reduce the need of purchasing potash. The natural strength of land and the kind of farming the land has had are big factors, and they cannot be ignored. So-called special crop fertilizers may have names that are very misleading to the individual purchaser.—Alva Agee in the National Stockman and Farmer.

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HANDLING BALKY HORSES

In nearly every case a balky horse is caused by a balky driver. A high-strung or nervous horse is easily ruined by bad driving, but if properly handled would become more serviceable for certain classes of work than any other horse in the stable. If a horse is inclined to balk, his attention, if possible, should be diverted until the spell is past. A good driver will not ply the whip at such times, but will persuade him to move without this form of persuasion. Do not give the animal a chance to exercise his own will. If he is inclined to stop, say "Whoa," and he will think he is stopping to obey his master and not to please himself. Then get down and make some adjustment of the harness, which will encourage the beast to try again, thinking that the load will move more easily with these changes being made. In reality it will, for the difficulty is within the mind of the animal, rather than in the adjustment of the harness or the hitchings. It may be that his mane has gotten underneath the collar and is irritating him. This remedied, the horse may be ready to respond, but if not, some other means must be devised. Some drivers go to the length of pouring a little water into the ears of the horse or of rubbing sand in his mouth, in the hopes of getting the horse to forget his balking. We prefer to resort to other methods, or, better still, to train our horses to be workers and not balkers. Every farmer has a number of faithful horses that have never been known to balk, and the reason is that the driver and the team have known each other perfectly. For instance, we could not conceive of old Prince, our oldest farm horse, balking with us, for we have been such good friends for so long. He is so anxious to serve and please his master that there is no danger of his balking.—The Wisconsin Agriculturist.

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SHEEP AS MONEY MAKERS

If live stock of any kind pays for raising and feeding in Illinois and sister states, sheep do, for they give as good returns, and, in general, better, for the amount of feed consumed, than any other. I am convinced that it pays better in a period of years to feed our grain to good stock and sell it in a finished product than to sell it in a raw state, especially if the fertilizer is considered of value, and which value cannot be ignored in the success of good and profitable farming; that no one doubts.

Sheep are on the decrease, while cattle and hogs are on the increase, in spite of the annual increase in mutton consumption over that of beef and pork. I find that sheep have natural advantages that cattle and hogs do not possess, and offer more sources of profit than either of the others.

First, they are prolific and raise their young on the most inexpensive feed, with the least care.

Second, their flesh costs the least to produce, and brings more on the market than any other; besides, it is a most healthful food for man.

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Fourth, they return more and better fertility to enrich the soil and distribute the same more evenly than any other animal. They help keep the land free of weeds and convert the same into a valuable commodity. They are the most easily managed animals, and do not tramp and tear up the field and lots like others, and one can turn them into fields to pick up waste where other animals could not be tolerated, and thus save a vast otherwise actual loss; and they can be retained in enclosures that will not hold either of the others. They thrive and fatten on pasture without any grain, but do not thrive in a pasture without grass. Sheep give on an average more pounds of meat to the bushel of grain than either hogs or cattle.—Jacob Ziegler in The Farmers' Guide.

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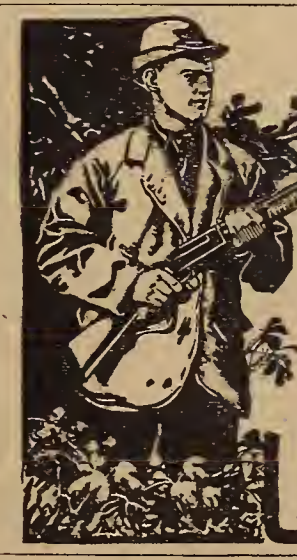

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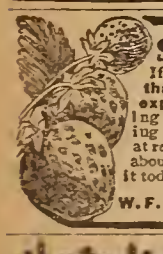

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Gardening

BY T. GREINER

STORING SALSIFY AND PARSNIPS

Some of our friends ask how to manage to have a supply of salsify and parsnips during the winter. Almost every one knows that these vegetables improve in flavor after freezing. They are extremely hardy, and I have never known them to be injured by the coldest weather in this climate, except in a few instances by repeated freezing and thawing in a season with frequent and unusually violent changes of temperature. But in open weather any time during the winter we may dig salsify and parsnips for use or for storage.

We usually dig a moderate quantity late in the fall, just before we expect settled cold weather, and put them in fairly dry sand in the cellar. They can be stored in the same way as winter radishes. They want a cool place, to prevent them from making new growth in the cellar, and they must be covered so as to prevent them from drying out and becoming shriveled. We want them fresh and crisp and brittle. Or we may pack them in sand or soil in a box, set in some outbuilding, where they may be allowed to freeze. When wanted the box can be taken to the cellar and allowed to gradually thaw out. Most of our salsify and parsnips, however, we leave out in the garden. They are dug in early spring as wanted for use or sale, and always come very acceptable.

EARLIEST POTATO

A reader in this state, who has just bought a small farm, asks for information about the earliest potato known, and where seed of it can be procured. We used to consider the Early Ohio the earliest of any sort that was worth raising, at least for us in this state. It is a good potato yet.

There are others about as early, as, for instance, Bliss' Triumph, the popular Southern potato grown so much for Northern markets, and of which the celebrated "second-crop seed" is grown purposely for Northern planting. I have grown these two sorts both on sandy loam and on stronger or somewhat clayey loams. I still prefer the Early Ohio on either. In fact, I make it my main crop for my own table use, as its quality is superb. As a keeper it is yet unsurpassed. We have it from the cellar dry and mealy, and of best flavor until the new supply comes in again from the field in July. I cannot do so well with the Triumph.

Then we have the new Noroton, or Noroton Beauty, also known as Uncle Gideon's Quick Lunch. This is a handsome and very interesting variety. On rich land and under especially favorable conditions it may give unbounded satisfaction. It "sets" remarkably early. The potatoes are of fair and even size, and the quality is good. But on an average I find it far less productive than the Ohio, and not more than on par with Triumph in this respect. About as early as any of these, however, and far more productive, is Irish Cobbler, of which a selected strain is also known as Maule's Eureka. I have grown this for a number of years, and grow it more largely even than Early Ohio. It is not quite so smooth as the Ohio, the eyes being often set somewhat deep. But the quality is good.

For garden uses, or where intensive culture is practised, as it should be on a small farm, I could not recommend anything better for early crops than the Ohio and the Eureka (or Cobbler), the latter, as I have often called it, our real business early potato.

Almost any prominent seedsman in the country offers seed potatoes of all the varieties here named. Look up their catalogues as soon as they make their appearance, which will be soon. You should also scan the advertising columns of the agricultural papers during the winter or when planting time approaches. Often you will find the advertisements of growers who offer Ohios and Cobblers at a moderate price.

MANURE FOR ONIONS

A reader in this state has three fourths of an acre which was in beets and carrots last year, and before that in grass for ten years. It is a heavy loam that had been used for growing onions several years before it was in grass. Manure was used on it freely last year. He asks whether onions can be expected to do well on this land with commercial fertilizers only, and if so, how much he should use on the piece.

With the land originally in good heart, and a heavy coat of manure put on last year, the crop of carrots or beets may be expected to have prepared the field nicely for growing an onion crop. The inquirer might use one of the special complete manures, such as used for potatoes, vegetables, etc., and containing several per cent of nitrogen (ammonia), eight to twelve per cent of available phosphoric acid and five to ten per cent of potash. Such a manure would cost from thirty-five to forty-five dollars a ton, and half a ton would be none too much. Or as a fair equivalent, he might apply about six hundred pounds of acid phosphate (dissolved rock) and two hundred pounds of muriate of potash, drilling or harrowing this in before planting; and sowing broadcast, after sowing the seed or setting the plants, about two hundred pounds of nitrate of soda. Another application of nitrate of soda may be made a few weeks later. It often shows immediate and striking results in the growth of the crop.

I would advise this inquirer to make a trial, on at least a small part of the patch, of the Prizetaker and Gibraltar onions grown by the transplanting method.

SALT VERSUS MAGGOTS

The same reader also asks whether the application of salt will help to protect the onions from maggots. I do not think it will. I have often heard that salt would have that effect, have tested it repeatedly, and always found it wanting. If onions have not been grown largely in the immediate neighborhood right along, it is not likely that the next crop will be seriously affected by maggots. In growing my crops of Prizetaker and Gibraltar onions I have sometimes found a few specimens that were ruined by maggots, but at no time have there been enough of them to make much of a fuss over.

ERADICATING QUACK GRASS

How to kill quack grass is another question asked by the same correspondent. It is one of the toughest weeds to fight—indeed, a tough proposition. But it can be killed. Persistence in "eradicating" it, which means pulling it out by the roots, will accomplish the object sought—perhaps.

The ground should be plowed, and the roots dragged up and out, and the ground be dragged and dug over and re-harrowed and re-plowed, always pulling up and removing the roots of the quack grass, until no more will be found. Thorough, clean cultivation afterward will finish the job. Or the grass can be choked out by sowing rape or turnips or some other close-growing crop which will cover the ground with a dense growth. I know of no other way.

THICK-NECKED ONIONS

One of our Illinois readers complains that his Prizetaker onions, of which he had about an acre on black soil, have mostly all grown with very thick necks, and that some of them are three onions in one. He asks for an explanation.

Sometimes the trouble is in the seed, more usually, however, in the soil or season. Some of these large varieties when planted on moist, mucky soils, and especially in a wet season, are quite liable to make scallions, and the application of nitrogenous manure would only increase that tendency. Neither will breaking or "rolling" the tops down in early fall or late summer give much relief.

The most that can be done is to select a drier piece of ground or a more sandy one, and use a larger proportion of mineral manures, such as ashes or muriate of potash and superphosphate. I have known lime, when applied to such lands, to make quite a difference, producing small-necked onions.

MARSH CROPS ON UPLANDS

Celery we all know is a plant that likes humus-laden moist land, hence people who have not tried, calmly state as a fact the cheerful fiction that celery cannot be raised on a market-garden soil much above the water level. Having raised the sweetest and crispest celery in our back yard (which has been tilled for a century or so as a vegetable garden), we had no hesitancy in planting various varieties at No. 1 experiment station of the Long Island Railroad, having been assured it would not even grow, but we took second prize at the county fair with this celery. No. 1 station, according to the United States Geological Survey is one hundred and twelve feet above the sea level, therefore it required very little nerve to plant a small patch of celery at station No. 2. Although the soil is somewhat lighter the altitude is only sixty-four feet above sea level. Humus is absolutely and entirely lacking, caused mainly by the annual "forest fires" due to cheerful neglect of precaution by neighbors burning brush to the north of us, in that section of the island at present given over mainly to cord-wood industry. A shallow ditch was dug, humus was furnished by barnyard manure, celery plants set out, and occasionally—or, to be more exact, semi-occasionally—the irrigation sprayers were turned on the celery plants, and, as is the ambition of all plant life, they grew, and station No. 2 turned out celery that holds its own in competition with that grown anywhere. We shall continue to grow celery at stations No. 1 and 2, as it eats well, sells well and makes an excellent variety for the now noted Long Island home hampers.—H. B. Fullerton in The American Cultivator.

POTATO SCAB

It does little good to treat potatoes for scab unless the soil is also free from fungous disease. Scab fungus is capable of living in a soil for a number of years without a host plant on which to feed. For this reason it is necessary to look after the soil, and usually it is not best to grow potatoes on the same ground two years in succession. Potatoes grown on low ground are more apt to be scabby than those grown on high, dry ground, and carefully conducted tests show that soil that is slightly acid is less apt to produce scabby potatoes than soil in which alkali predominates. The best way to get scab fungus out of the soil is by systematic rotation of crops in which two or three years of grass form a part. Once the soil is clean scab may be kept out by soaking seed potatoes an hour and a half in a solution made of a pound of formalin in forty gallons of water.—The Fruit Growers' Journal.

HOLLOW CELERY

A reader in Ohio writes that he has the best celery this year that he ever raised, but two thirds of it is hollow, the stalks being only a shell. He began banking it when it got to be high enough, and continued banking up as it grew larger. That is exactly the way I manage it. The time of banking has nothing to do with the hollowness of the stalks. I believe that I have already explained the cause of the trouble, and have little more to add. Put plenty of the mineral plant foods into the soil, give it good cultivation and a continuous moderate amount of moisture, and you have done about all that you can do to get solid and brittle stalks.

By means of using excessive amounts of stable manure and water I have before this obtained a very tall and apparently thrifty growth of White and Pink Plume celery, but the stalks were worthless because hollow. Golden Self-Blanching was much better, although shorter in growth. I find it one of my most reliable varieties, so far as solidity of stalk is concerned. All these sorts were blanched with boards. I believe that if I had applied ashes and superphosphate in time, the stalks would have been materially better.

It is not impossible that heredity in the strain may have some influence in this respect also. We must try to get our celery seed from a reliable seedsman.

TO KEEP MOLES AWAY

To keep moles out of the garden and lawn in the early spring, get five cents' worth of castor-bean seed, and plant three seeds in a place, but let only one plant grow. Have four or five plants in a garden or lawn, and no moles will ever come in. JOHN SCHIEDORF.

BANKING CELERY

A Maryland reader is afraid of earthing up his fine celery while the ground is damp, as he thinks it might rot it. Celery may be handled, banked, stored or moved any time when the tops are dry. It will not make any difference if the soil is damp.

We can pack soil that is pretty wet around the roots and stalks and up to the leaves without endangering the plant thereby. But for storing in trench or cellar, or when in such storage, don't let any water get on the tops. Soak the roots if you like (and all the better if they are kept quite damp), but keep the leaves dry.

We believe the advertising sections of FARM AND FIRESIDE are valuable and instructive features of the paper, because the advertisers are carefully selected, and they bring the markets of the world and all the latest inventions to your own door. This would not be true if we accepted fake or doubtful advertising, but all such advertising is invariably refused.

Fruit Growing

BY SAMUEL B. GREEN

PRESIDENT DROUARD PEAR

G. H. S., Newport, West Virginia—There seems to be two pears that have been sent out under the name of President Drouard in this country. I am inclined to think that the typical variety is one that ripens late in the autumn, but there is also one that ripens in winter. The description for each fruit is about the same, with the exception of its season of ripening. The description is as follows:

The Drouard pear is a European variety which probably originated in France. The trees are quite strong and of an upright and slightly spreading form.

The fruit is quite large, roundish, obovate, obtuse, somewhat irregular; cavity deep, small, irregular; stem three fourths of an inch long, rather stout; basin medium, shallow, slightly irregular; calyx small, partially closed; color yellow, considerably washed, netted and specked with russet; flesh creamy white, tender, buttery and with a sweet perfumed flavor; quality good; season October and November.

Trees set out in 1890, at the Michigan Experiment Station were still only moderately productive in 1901, but otherwise the variety was very promising for market.

Bulletins Nos. 169 and 194, Michigan Agricultural College, Bulletin No. 205 and Special Bulletins Nos. 27 and 30 have notes under the same variety name, but apparently a different variety.

◈

LEAF CRUMPLER

H. M. L., Pawhuska, Oklahoma—The box of crumpled leaves which you sent, and which you state are found in your apple and plum trees, contains the larvæ of an insect known as the leaf crumpler.

This insect feeds on the leaves during the growing season, and gathers a cluster of them together, in which it lives. It may therefore be easily destroyed by spraying the foliage with Paris green and water when the worms are feeding. Of course in the case of plum trees great care must be taken, in applying Paris green or other poisons, not to burn the foliage, and for this purpose probably arsenate of lead is a safer preparation for you to use than Paris green, although the latter would be perfectly safe on apple trees.

◈

DISEASE OF RAMBLER ROSES

A. W. P., Hawarden, Iowa—The disease you refer to as affecting your roses in autumn and appearing like mildew is in fact a mildew which attacks roses in autumn when their vitality begins to wane. It occurs especially when we have cold nights. It seldom does any harm to the plants, although it would doubtless be better for them to ripen up their foliage in the usual way. It may be largely prevented by spraying the plants with carbonate-of-copper solution. You would also find that dusting flour of sulphur on the leaves would prevent it to a considerable extent.

◈

PLUM CURCULIO INJURING APPLE

R. H. H., Peachland, British Columbia—The very knotty, irregular-shaped apple you sent may have been injured by some entirely physiological cause. In my opinion, however, judging from this one specimen, I think the trouble was caused by the plum curculio, and would ask if you are not troubled to some extent with this insect. We have it in our orchard, where it seriously injures some varieties and leaves others alone.

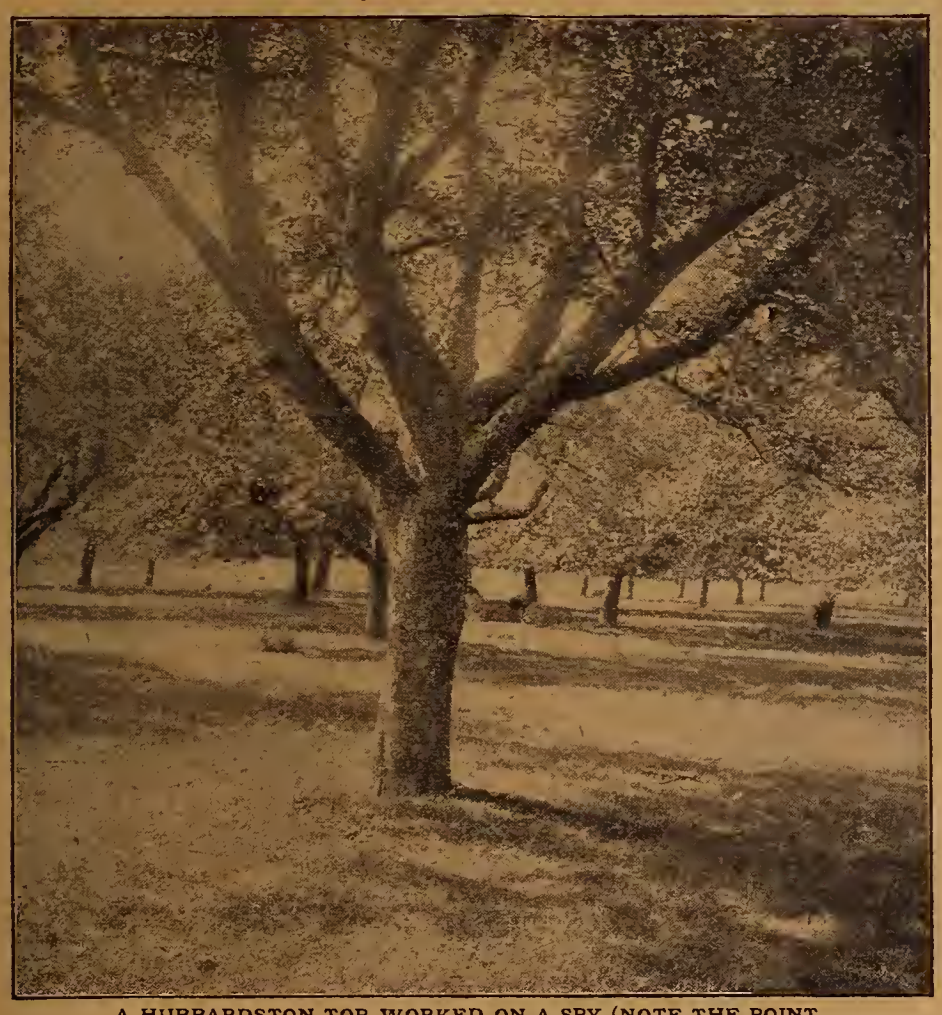
If you will write to the Illinois Experiment Station for their bulletins on "Plum Curculio Injuries," I think you will find in them considerable amount of material that will throw light on this subject.

◈

WOOLLY APHIS

A. W., Freeport, Minnesota—I have examined the specimens you sent, and find every evidence of some insect resembling the woolly aphis; but as there are a number of native species that closely resemble this form, and the samples you sent were in poor condition, it would be out of the question to identify them, and I must ask you to send another specimen, but do not enclose it so tightly, as the specimen had sweat in the bottle, and as a result the insects sent were destroyed.

I doubt very much if you have woolly aphis on your apple trees. I think more than likely it is a form that is common in our woods on the cratægus, and which does not seem to be especially injurious. If you think your trees are infested with woolly aphis, the best way to find out is to dig down to the roots and see if you can find the insects within one to two feet of the tree, as this is really where they are found, and only on roots that are rather near the surface.



A HUBBARDSTON TOP-WORKED ON A SPY (NOTE THE POINT OF UNION ON THE STEM)

◈

BOOK ON NURSERY WORK AND SEEDS

J. E. T., Woodlawn Cemetery, Winona, Minnesota—I think the best book on nursery work and the care and management of seed is one entitled "The Nursery Book," by L. H. Bailey, published by Macmillan & Co., and sold by them at $1.00 a copy.

On the general subject of care and management of tree seed, including the evergreens and other trees in Minnesota, I would suggest that you get "Forestry in Minnesota," which can be obtained of the Horticultural Division of the State University at St. Anthony Park, at twenty-five cents a copy. This is a publication of the Geological and Natural History Survey, and treats of forestry in Minnesota.

TRIMMING TREES—FERTILIZER FOR ORCHARD

M. J. E., Westminster, Maryland—The months of October and November afford a good time in which to trim fruit trees. I think, however, that special pains should be taken to cover with white lead the large wounds that are made at this season of the year. Pruning may also be successfully done on fruit trees on mild days in winter, especially in your section.

Probably stable manure is the most economical fertilizer to apply in the orchard, but where this cannot be obtained, it is a good plan to use cover crops, such as red clover, buckwheat and in your section crimson clover, which should be sown in the latter part of the summer, and it will make a very excellent growth for plowing under in the spring. If in addition to this a small amount of fertilizer is used you can get along very well without stable manure. A very good fertilizer for this purpose is made up of four hundred pounds of fine ground bone and one hundred pounds of high-grade muriate of potash. This should be applied early in the spring and be worked into the soil.

◈

VARIETIES OF STRAWBERRIES

A. H. G., Canton, Ohio. Among the best varieties of strawberries for cultivation in your section are Senator Dunlap, Splendid and Aroma. I would suggest, however, that you write to the Ohio Experiment Station, Wooster, Ohio, and ask them for their latest bulletins on the cultivation of the strawberry, and to recommend to you a list of the best varieties for your section. For an elementary work on the general cultivation of strawberries you might get "Amateur Fruit Growing," published by the Webb Publishing Company, of Saint Paul, Minnesota.

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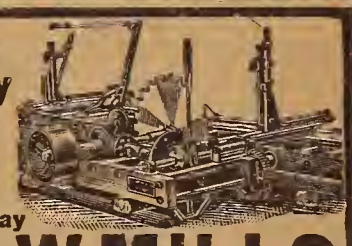

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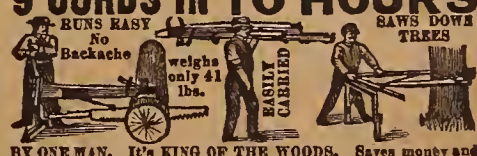

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Poultry Raising

EGGS OR POULTRY

IF KEEPING hens you should do so for a purpose. If only a small flock is kept, it will matter but little whether they are intended for eggs or the table, as they will cost but a small sum and the receipts will not be great; but if a large flock is kept, one should have either eggs or poultry in view as a leading business, for unless there is a specialty there will be no excellence in either, the best egg-laying breeds being unsuitable for market and the choice market breeds not equaling the breeds adapted for producing the greatest number of eggs.

If one is determined to supply eggs for market he should give the market qualities of the breed very little consideration and aim to keep his hens in good laying condition. When the stock for next year is hatched, in order to have good laying pullets, the eggs for hatching should be from the hens that have given good records. They may be but indifferent hens from a market point of view, but if eggs are a specialty, all attention should be turned in that direction alone and every effort made to succeed.

FATTENING DUCKS

To fatten ducks they should be kept clean and confined in yards. Feed potatoes or turnips (cooked), and thicken to a stiff mess with a mixture of equal parts cornmeal, bran and ground oats, adding a gill of linseed meal and half a pint of ground meat to each quart of the ground grain. Feed three times a day, as much as they will eat at a meal. If they show leg weakness, sell them at once, as they will be fat. Sweet potatoes or even a little molasses in the feed will be an advantage. Water is essential and must never be omitted.

THE NEW HEN HOUSE

When the cold days of winter shut the farmer in he can have time to plan out his next spring's work. One of the most essential things on the farm will be the hen houses, either to be repaired or rebuilt. As the poultry houses on farms during the past years have had to be repaired often as a general rule, would it not be better to build more substantial ones at first and save the trouble and expense of continually improving them? Let us consider this matter. The carpenter usually thinks that any kind of wood will do for a hen house, and in that he is much mistaken. Only the well-seasoned wood should be used, for when the damp days arrive, the house having no heat in it, the boards will shrink and expand until they are out of shape more or less, and then there are cracks to contend with. Use the best wood in the first place.

Another point worth considering is that of planing the boards that are to be used on the inside of the house. It will take very little more time, and they are then easily cleaned and do not harbor dust as much as if they were rough. If they are smooth they can be easily whitewashed or painted.

The main point to consider in building a hen house is that of removable roosts, nests, and even the floor boards, if there is to be a board floor. Make all these appliances of smooth board or wood, and when they are dirty, or the farmer wishes to clean his poultry house, they can be taken out into the yard and sprayed, washed, or even burned over with a torch. Consider all these things now, and in the end they will be much more economical.

A NEW USE FOR ELECTRICITY

It was some twenty-five or thirty years ago when the poultry raiser laughed at the idea of hatching eggs without a hen, but when they actually saw it done with hot-water incubators they acknowledged their defeat and shared the spoils. A few years later some poultryman who was still more practical started using an incubator heated with a lamp instead of hot water. A little later, where several incubators were used, steam plants were erected and the heat radiated from coils of pipe running from one incubator to another. But now the incubator men of to-day are, and will continue to be, hatching chickens by electricity. It would seem almost improbable, but nevertheless it is a fact. The heat from the electricity serves to take the place of the hot water, the lamp and the steam coils, and it is surely a great improvement over the old-fashioned way.

The lamp incubators, however, will not go out of existence, for they are more easily operated by the amateur, while those in which electricity is used require a great deal of skill and judgment. In the years to come, however, it is not impossible that nearly all chickens will be hatched in that manner. It is safe to claim, all things being considered, that it is the safest, cleanest and probably the most easily operated, when once understood, manner of hatching chicks that is known. The electrical brooders and little houses warmed by electricity are all in use to-day, and in a few years probably all poultry raisers will be thoroughly acquainted with them.

FRESH EGGS FOR THE FAMILY

Unless one is an expert it will be difficult to buy eggs as fresh as those that can be produced at home with a small flock. Let any one try the experiment of attempting to procure a lot of fine, strictly fresh eggs and it will be found difficult. No one can guarantee eggs. The market man knows nothing of them other than what the parties from whom he procured them may claim; and even the farmer, careful as he may be, will occasionally make mistakes. The value of home-produced eggs is greater than the highest prices quoted in market.

CHARCOAL

Charcoal is one of the articles whose cheapness is not in accord with its merits. It may be put to a number of uses on the farm, especially in the poultry branch of the business. A lump of charcoal in the nest boxes will absorb moisture from the nests and will also aid in keeping them from having a foul odor. A piece of charcoal in the drinking water is also a good filterer and purifier. Fed to the fowls it will promote digestion by absorbing the sour elements which are objectionable in the digestive organs, and will purify the noxious gases in the stomach and intestines. The birds relish it, also, and will eat it if a little is given them with their food. It does them a great deal of good in aiding their digestion and regulating the bowels. It is cheap enough to scatter in the yards in powder form after the yards are newly cleaned. Try it and see if the cost of it is not more than returned in the advantages secured thereby.

ADVANTAGES OF HOME MARKETS

An excellent home market for produce may be made by any one who will give special attention to the quality of the products made on his farm. The farmer who is well known to the people of the nearest village as one who pays special attention to all the details for supplying only the best will soon find himself burdened with more orders than he can fill. When such a reputation is once gained there will be no difficulty in securing good prices, nor need there be any fear of opposition, as the buyers are always ready and willing to pay for a good article when they have implicit confidence in the producer.

Confidence is the secret of success. The first thing to do is to teach the purchasers that even when you have the opportunity for doing so you will take no advantage of them, and that your guarantee may be relied upon. In this manner of doing business a mutual benefit will result to both parties.

LESS VENTILATION

Do not fear that the fowls will suffocate in their houses if confined during cold weather. Stop up the ventilators, keep the birds warm, and eggs will be the result. The theory that a hen wants as much fresh air as a horse is incorrect. Hundreds of hens die from too much so-called fresh air in winter, but none die from the lack of it. Roup is the result of ventilation in poultry houses in winter.

HAMBURGS

The Hamburg is one of the most beautiful fowls on the market to-day. It varies in color, according to the variety. It is a small fowl, and often matures in five months in moderate climates, taking a little longer in cold climates.

Select the mothers of the future Hamburgs now, for if they are hatched in January they will begin to lay about June or July. They will molt in the fall, and then start to lay again in a year from the time in which they were hatched. If the climate is very cold, however, they will not begin to lay until about April. They are bred more for beauty than for utility in cold countries.

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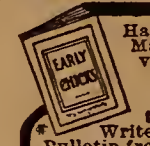

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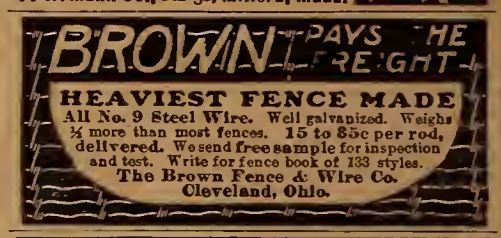

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EW

History of the Jersey Cow

By M. A. Scovell

DIRECTOR OF THE KENTUCKY AGRICULTURAL EXPERIMENT STATION

THE name Jersey is derived from the word Cæsar. Although the island is but a speck on the globe, it is not the least among the many things to which the mighty name of Cæsar has become attached.

The little island lying in the English Channel has always possessed a delightful climate, a unique flora and favorable conditions for the production of many agricultural products. Perhaps the location of the island, so far removed from the great centers as to be cut off from shipping milk and yet near enough to freight outlying boats with firkins of rich butter, brought about the evolution of the Jersey as a butter-producing cow. At any rate, such has been the island's contribution to the world. Perhaps no species of live stock has ever elicited such admiration and enthusiasm as the bright, gazelle-eyed Jersey cow. She has been the resource and stay of the cottager as well as the luxury and fad of the rich lord, earning her dower of affection and admiration from both alike.

Historically, the Jersey is unique. She has been bred on the island free from the admixture of other breeds for nearly two hundred years. She has been peculiarly free from disease. She has been bred, first, for butter production—that is, rich milk; second, for beauty of form; third, for the economical production of butter, and lastly, she is now being bred for milk production.

EARLY HISTORY

The earliest writers claim that the Jersey was superior to other breeds of cattle on the adjacent coasts of France. As early as 1734 Philip Falle writes: "The cattle on this island are superior to the French." Thomas Quayle in 1812 claims an advantage over any other breed in the quantity and quality of cream produced from the consumption of a given quantity of fodder. Colonel Le Couteur says the superiority is attributable to the circumstance of a few farmers having constantly attended to raising stock from cows of the best milking qualities, "which tendency prosecuted for a long number of years in a small country like ours, where such superior qualities would soon be known, led to the excellence of milk and butter yielding qualities in the race."

We may assume, then, that the breed owes its peculiar qualities to an evolution of persistent breeding to perpetuate and accentuate distinctive qualities, and to the exclusion of all other cattle from the island. The method of tethering, which has always prevailed on the island, may have had its influence, as the fine, deer-like limbs and the full, docile, lively eye must have appealed to the affection of the islander, as morning and night he led his cow or little herd to and from the pasture, as did the amount of butter he could spare for the outgoing boat appeal to his desire for profit.

The early writers describe the Jersey as an ugly, ill-formed animal, with flat sides, hollow back and much drooping at the rump. She possessed, though, even at that time, her peculiar, attractive, lively eye, deep body and deer-like limbs. She had no distinct color markings in her early history. She might be solid color or broken colors, as fawn and white, black and white, or, like "Living Storm," fawn, brown, black and white, all in one. The color craze which struck England and America in the seventies was never a fancied point on the island. As early as 1873 the Agricultural Society of Jersey reports: "Let henceforth such fanciful ideas as black tails and black tongues be estimated at their proper value, but let the large and rich yield of milk be ever the breeder's ambition."

It was early in the history of the Jersey cow that attempts were made to bring about fixed beauty of form. To this end a number of farmers selected two of the best types they could find in the island at that time—one perfect in her barrel and fore quarters, the other equally so in her hind quarters. From these two a scale of points was laid down to be the rule for governing the judges at the cattle shows of the Jersey Agricultural Society. This scale of points is interesting, and being the first scale of points is herewith given:

DOLLIE'S VALENTINE 105049

Record: 10,218.3 pounds of milk in one year, making 676 pounds of butter. Owned by the Kentucky Agricultural Experiment Station, Lexington, Kentucky

SCALE OF POINTS FOR BULLS

Article	Points
1. Purity of breed on male and female sides, reputed for having produced rich and yellow butter	4
2. Head fine and tapering; cheek small; muzzle fine, and encircled with white; nostrils high and open; horns polished, crumpled, not too thick at the base and tapering, and tipped with black; ears small, of an orange color within; eye full and lively	8
3. Neck fine and highly placed on the shoulders; chest broad; barrel hooped and deep, well ribbed home to the hips	3
4. Back straight from the withers to the setting on of the tail, at right angles to the tail; tail fine, hanging two inches below the hock	3
5. Hide thin and movable, mellow, well covered with soft and fine hair of a good color	3
6. Fore arm large and powerful; legs short and straight, swelling and full above the knee, and fine below it	2
7. Hind quarters, from the huckle to the point of the rump, long and well filled up; the legs not to cross behind in walking	2
Perfection	25

No prize shall be awarded to a bull having less than twenty points.

SCALE OF POINTS FOR COWS AND HEIFERS

Article	Points
1. Breed on male and female sides reputed for producing rich and yellow butter	4
2. Head small, fine and tapering; eye full and lively; muzzle fine and encircled with white; horns polished and a little crumpled, tipped with black; ears small, of an orange color within	8
3. Back straight from the withers to the setting on of the tail; chest deep and nearly on a line with the belly	4
4. Hide thin and movable, but not too loose, well covered with fine and soft hair of good color	2
5. Barrel hooped, and deep, well ribbed home, having but little space between the ribs and hips; tail fine, hanging two inches below the hock	3
6. Fore legs straight and fine; thighs full and long, close together when viewed from behind; hind legs short, and bones rather fine; hoofs small; hind legs not to cross in walking	2
7. Udder full, well up behind; teats large and squarely placed, being wide apart; milk veins large and swelling	4
Perfection for cows	27

The points shall be deducted from the number required for perfection in heifers, as their udder and milk veins cannot be fully developed. A heifer will therefore be considered perfect at twenty-five points.

No prizes shall be awarded to cows or heifers having less than twenty-four points.

EARLY IMPROVEMENT

The most important steps ever taken to make the Jersey what she is were the steps taken to prevent outside cattle coming into the island. As early as 1763 an act was passed, which has since been rigidly enforced and supplemented by the further acts of 1789, 1826, 1864 and 1878, prohibiting the landing of cattle on the island. Even before any laws were passed the Jerseyman was ever on the alert to prevent other cattle landing on the island, and so persistent were the owners that it is doubtful if any other cattle were brought into the island even at early times.

The Jersey Agricultural Society has been an important factor in the improvement of the character of the Jersey on the island and in the development of its valuable dairy qualities. This society was organized in 1830, and it has continually watched over and cared for the Jersey breed of cattle. Most of its time has been taken up in an effort to improve the breed, first, in regard to the richness of milk, second, in beauty of form, and later, in regard to the production of large quantities of milk. We find, in 1835, that the society was congratulated upon "the happy results of its influence in producing a spirit of emulation that the race of Jersey cows may become still more valuable and perfect." The year following, the society, through its committee, recommended that one superior bull be kept in each parish, and that encouragement be given to keep first-rate heifers on the island. A year or two after this it enacted two new rules—one to the effect that any person withholding the services of a prize bull from the public should forfeit the premium; the other, that all heifers having received premiums should be kept on the island until they shall have dropped their first calf.

In 1853 the society reports "that the only means of keeping up the reputation, and as a natural consequence the pecuniary value, of our native breed are to prevent its deterioration, to eradicate its defects and to perpetuate and increase its excellencies. Such results can only be obtained by selecting the finest and most perfect for reproduction, resolutely rejecting from the breeding stock every animal in which defects are to be found, 'like producing like' being a maxim which every breeder must ever keep in view."

Again we find, in 1862, a committee from the society reporting as follows: "That to a very considerable extent the business of the society is limited to the improvement of our insular race of cattle, which in itself is of the highest importance. We therefore wish to impress an observation on those who study the improvement of their stock—beauty of symmetry alone cannot ever be the acme of perfection. The latter can only be obtained when goodness and beauty are equally combined. It is an established fact that the renown which the Jersey cow enjoys is attributable to the peculiar richness of its milk, as well as to its docility of temper and neatness of form. Now, as this richness is not so marked in some specimens as it is in others, it becomes advisable to make such selection in breeding as will ensure further amelioration in this most essential and highly important point."

INCREASING QUANTITY OF MILK

As stated before, the quality of milk, the quantity of butter and beauty of form seem to have been the only points which the breeders had considered. But along in the early sixties attention was given to the quantity of milk, and the Agricultural Society seems to have taken great interest in giving this point attention. The society urged that every breeder should pay greater attention to the milk-producing qualities of the cow, and that every cow with the least tendency to deficiency in quantity of milk should be weeded out, and suggested that the judges especially consider this in awarding prizes. It will be seen, therefore, that the Jersey has been bred for quantity of milk only for about forty years.

From what has been stated it is evident that the Jersey Agricultural Society has had a marked influence in perfecting the Jersey cow, and it is little wonder that with the watchful care which the society has given to the breed for nearly a hundred years that it has improved so marvelously.

THE HERD BOOK

The Jersey Herd Book was started in 1866, and has undoubtedly had a marked influence on the improvement of the Jersey

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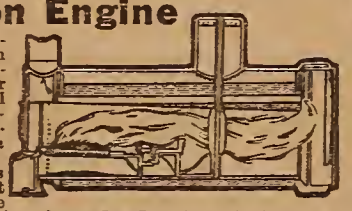

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cow on the island. In America or in England an animal may be registered as soon as born if its sire and dam are registered or are capable of being registered. On the island, however, inspection is made a conditional precedent to registering. The following are necessary conditions to registration:

1. Every animal must be inspected by competent judges, and if it is considered fit, it obtains a qualification—namely, "commended" or "highly commended."

2. Every bull submitted for qualification must be accompanied by his dam, in order that the merits of the latter may be taken into consideration in awarding a commendation to the former.

3. No heifer, although she may be descended from registered parents, can be entered in the Herd Book until she has had a calf, and if at the time of her examination she is a poor milker, she receives no commendation.

It will readily be seen, therefore, that by the method of registration on the island of Jersey not only the pedigree can be traced, but it can be ascertained whether the dams and sires for generations back have been "commended" or "highly commended" by the commissioned judges. These commendations are shown in the pedigree by the letter "C" if commended, and by the letters "H C" if highly commended.

IMPORTATIONS INTO ENGLAND AND AMERICA

Jersey cattle were imported into England as early as 1835, and in large numbers in the forties. Prof. L. W. Low in 1845 says: "The cows are imported into England in considerable numbers, and are esteemed beyond those of any other race for the richness of their milk and the deep yellow color of their butter."

The first importation of cattle into America began in the year 1850, when twelve animals were imported under the auspices of a club of farmers organized for the purpose. Their agent brought from the island only prize winners. The bull "Splendens" was in this importation, and he proved to be a very valuable animal. Other importations followed, mostly to Connecticut, Massachusetts, New Jersey and New York, and from 1860 to 1890 importations were numerous to nearly every part of the United States. More than two thousand a year were imported year after year, and again, from 1900 to the present time, many importations have been made. In fact, so numerously have they been imported and so rapidly have they increased in America that they outnumber the Jerseys on the island or any other breed of dairy cattle in this country.

In 1866 the Jersey Herd Book was begun in America, and in 1868 the American Jersey Cattle Club was organized. This society has done much to develop and keep the blood of the Jersey pure in this country. The club registers only such animals in its Herd Register as can be traced directly to the island of Jersey. There have been sixty-one volumes of the Register published, bringing the records and pedigrees for bulls up to 74,926, and for cows up to 202,630. It is estimated that here are 120,000 registered cattle alive in the United States to-day, besides hundreds of thousands of grades.

TESTS AND RECORDS

As on the island, so in America, for many years the Jersey was bred almost exclusively for its butter-producing qualities. Many private and official butter tests have been published, giving phenominal yields of butter. As the result of these tests, so-called families of Jerseys have sprung up, as the St. Lambert, the Signal, the Combination, the Victor, the Tormentors, etc. But a careful review of authenticated tests, and especially the results of the official tests at the Columbian and at the Louisiana Purchase Expositions, show that the excellence is inherent in the breed generally and is not confined to any particular line or lines of breeding. Of late years much attention has been paid to the breeding of Jerseys for milk production as well as for butter and for beauty of form, with excellent results. Jerseys giving four and five gallons of milk a day are not rare in any herd, and such cows are noted for persistence in milking. Records are given of individual cows giving ten thousand, twelve thousand, and even more, pounds in a year.

From the fifteenth Annual Report of the Bureau of Animal Industry, United States Department of Agriculture:

Herd records are numerous. Ten selected as having average dairy farm conditions include one hundred and forty cows and cover six years. The annual milk product per cow was 5,157 pounds, yielding 293 pounds of butter. Among these was one herd of twenty-five cows of all ages with a continuous record of seven years. The annual average per cow was 5,668 pounds of milk and 342 pounds of butter. Several herd records for shorter periods show average yields of six and seven thousand pounds per cow.

The most interesting results are those from the Dairy Test at the World's Columbian Exposition at Chicago in 1893, and the Cow Demonstration Tests at the Louisiana Purchase Exposition at St. Louis in 1904. In both instances the cows were selected by and cared for and fed by the American Jersey Cattle Club, and it may be assumed, therefore, that the best cows in the breed, available at that time, were selected in each case. The test was conducted in each instance by a committee of the Association of American Agricultural Colleges and Experiment Stations. The results show that the Jersey cow can assimilate a large quantity of food; give from four to five gallons of rich milk a day, and that she is a persistent milker; and if conclusions can be drawn from comparison of the two tests, each with the same number of cows, selected in the same manner and under like conditions, it is that in eleven years the Jerseys have increased largely in flow of milk and in the production of butter.

It further shows that the Jerseys were quite uniform in production of both milk and butter. There were no "tail enders." This is one of the most important facts brought out by the tests.

From the results, the conclusion to be drawn is that the Jersey is susceptible, in a marked degree, of showing still greater capacity in the production of both milk and butter, and with watchful care, such as is given her on the island of Jersey, keeping only premium bulls and cows to perpetuate the species, we may expect that the breed will be perfected in beauty of form, grace of carriage and constitutional vigor, along with her capacity as a milk and butter producer.

JUNE BEAUTY'S ROSE 186148

A typical young Jersey cow. Owned by the Kentucky Agricultural Experiment Station Lexington, Kentucky

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Statistics relating to the consumption of the different kinds of meat in the United States show that beef and veal constitute forty-seven per cent; pork, forty-six per cent, and mutton and lamb, seven per cent. In our exports to foreign countries the percentage of pork is sixty-six, and of beef, thirty-four. *

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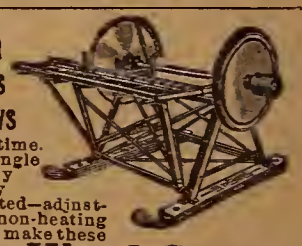
Guaranteed to skim closer than any separator in the world. Sold direct from the factory. We are the oldest exclusive manufacturers of hand separators in America. You save all agents', dealers' and even mail order house profits. We have the most liberal 30 DAYS' TRIAL, freight prepaid offer. Write for it today. Our new low down, waist high separator is the finest, highest quality machine on the market; no other separator compares with it in close skimming, ease of cleaning, easy running, simplicity, strength or quality. Our own (the manufacturer's) long term guarantee protects you on every AMERICAN machine. Don't buy a separator from any agent, dealer, or mail order house; don't make any contract or agreement; don't accept any machine finally until you run a few gallons of milk through our new comfortable waist high AMERICAN. Use it every day for a month and see how it outclasses every other machine. We can ship immediately. Let us send you our new Cream Separator Offer. It's different from any other, just as our new waist high AMERICAN is miles in advance, years ahead of any other separator in the world. Write for our great offer and handsome free catalogue on our new waist high model. Address,

AMERICAN SEPARATOR CO.
Box 1058, Bainbridge, New York.

You never saw a saw which saws like this saw saws



and last so long a time. Frame of heavy angle steel strongly braced—absolutely no shake. Patented—adjustable, dust-proof, non-heating oil boxes, etc. We make these

Appleton Wood Saws

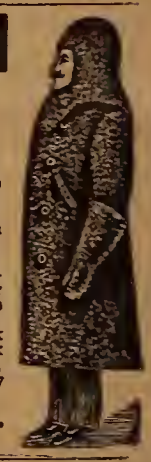
In 6 styles—strong, simple, safe and successful—and we make a 4-wheel mounting for wood saws and gasoline engines which is unequalled for convenience and durability. Saw your own wood and save time, coal and money—then saw your neighbors' wood and make $5 TO $15 A DAY We make the celebrated

HERO FRICTION FEED DRAG SAW

nothing like it—no other so good. Also feed grinders, shellers, fodder cutters, huskers, manure spreaders, farm trucks, windmills, etc., all guaranteed full **Appleton Quality.** Catalog free for the asking. Ask for it now.

APPLETON MANUFACTURING CO.
9 Fargo Street Batavia, Ill., U. S. A.

LET US TAN YOUR HIDE,



Whether Steer, Bull, or Horse Hide, Calf, Dog, Deer, or any kind of hide or skin with the hair on, soft, light, odorless and moth-proof for robe, rug, coat or gloves, and make them up when so ordered.

But first get our illustrated catalog, with prices, shipping tags and instructions. We are the largest custom fur tanners of large wild and domestic animal skins in the world.

We make and sell Natural Black Galloway fur coats and robes, Black and Brown Frisian, Black Dog Skin, and fur lined coats; also do taxidermy and head mounting.

THE CROSBY FRISIAN FUR COMPANY,
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Neglect Will Ruin Your Horse

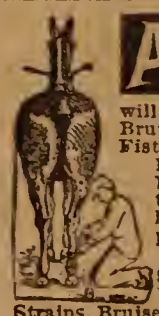
Send today for only

Permanent CURE

Safe-Certain

$3 PACKAGE will cure any case or money refunded
$1 PACKAGE cures ordinary cases. Postpaid on receipt of price. Agents wanted. Write for descriptive booklet.

MINERAL HEAVE REMEDY CO.
428 FOURTH AVENUE. PITTSBURG, PA.



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will reduce Inflamed, Swollen Joints, Bruises, Soft Bunches, Cure Boils, Fistula, or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. $2.00 per bottle, express prepaid. Book 7-C free.

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Reflects experience of most successful Veterinary Surgeons. Treats all subjects relating to Ailments of Horses, Cattle, Hogs, Sheep and Poultry. Worth Ten Dollars to any farmer. Most comprehensive Animal Doctor Book published. Send two 2c stamps (mailing expense) for FREE COPY of this 164-page book

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of trains, trolleys or automobiles if driven with a "Beery Bit," the only absolutely safe and humane bit made. "Four Bits in One." Quickly adjusted to suit any mouth. Write me today for trial offer and much valuable information.

Prof. J. R. Beery, Pleasant Hill, Ohio

Live Stock and Dairy

EXERCISE FOR PREGNANT EWES

SUFFICIENT exercise for breeding ewes during the winter season is too often neglected. The young farmer or the beginner in the business is liable to overlook this important feature; in his zeal to give his flock the best care he is quite likely to keep them too closely housed and yarded.

The confinement of ewes in small feed lots is almost invariably followed by considerable loss and annoyance at yeaning time, due to the lambs being weak. Many farmers have experienced heavy losses on this account alone.

It may be prevented by allowing greater range; if the ewes seem indisposed to take exercise, they should be driven out of the yard, or should be fed at a distance occasionally, in order to compel them to get sufficient exercise.

GEO. P. WILLIAMS.

OHIO DAIRYMEN'S CONVENTION

At the Ohio Dairymen's Convention, which will be held in Columbus, Ohio, on February 12, 13 and 14, 1908, there will be two beautiful pure-bred Jersey heifer calves given as premiums.

Mr. D. H. Olds, of Springfield, Ohio, will give to the person receiving the highest score in market milk, a calf from his well-known Alta Jersey herd. Mr. Olds says that this calf will be "all wool and a yard wide."

Mr. C. A. Pontius, of Canton, Ohio, has offered as a prize for the best dairy butter, a fine calf from his herd.

Who will win a calf?

The programs of the convention will be out in due time. Any one wishing to enter the contest may find full directions in the program. Send your address to the secretary of the Ohio Dairymen's Association, Columbus, Ohio, and a copy of the program will be sent to you as quickly as it comes from the press.

E. S. GUTHRIE, Secretary,
Ohio State University, Columbus, Ohio.

NOTES FROM THE INTERNATIONAL

The most-sought-for prizes of the Eighth Annual International Live Stock Show held in Chicago were distributed as follows:

The grand champion steer was Roan King, a Shorthorn yearling, bred by James Leask, Greenbank, Ontario.

The grand champion barrows were a pen of Berkshires sent to the show by the Ohio State Agricultural College.

The herdsman medal offered to the herdsman who fitted the champion steer for the show went to Mr. Leask, owner of Roan King, who was his own herdsman, and therefore claimed and was given the trophy.

Some of the features of the show were: The remarkable attendance, which on a single day reached seventy thousand people; the big showing of horses; the greatly increased attendance of students of agricultural colleges; many new features in ring entertainment at night, chief among them being the drilling of a cavalry troop from Fort Sheridan.

The International Live Stock Show by the result of the exposition of this year has taken a stronger hold on life. The experts claim that there were more and better animals of each of the four classes shown, that the very cream of the live stock of this country and of Canada was at the show. A large amount of money was distributed in cash prizes, and it is assured that the encouragement is such as to cause the association to plan for a still better event next year.

In point of numbers the cattle tribe led, the sheep came next, then the horses, and lastly the hogs, but it was a difficult matter to tell where the most interest was centered. It was a show of blue-ribbon winners, some of the exhibits having been seen at upward of a dozen big fairs during the season.

By all odds it was the busiest week of live-stock judging that ever was seen in this country. It required a force of one hundred judges collected from sixteen states, Canada and Scotland to handle the big job. The largest arena in the live-stock world was kept filled almost every hour of the show day, the uniform character of the animals requiring tedious and patient work in order to reach a decision. The judges would have liked to have several blue ribbons for single awards, so near were animals matched in almost every particular.

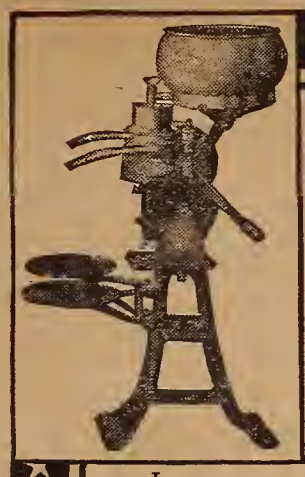
The parades of the different cattle breeds formed one of the grandest spectacles ever witnessed at a similar event. The showing of the white-faced creatures of the Hereford tribe was applauded to the echo by the enthusiasts of that breed, but the Angus men and women, for many of the most enthusiastic visitors belonged to the female sex, voiced their pride in their favorite breed no less vociferously. The Hereford people were greatly disappointed in losing the grand championship steer to the Shorthorns, and of course the breeders and feeders of that tribe were correspondingly elated.

The only setback that came to the American breeders was that their Canadian brothers seem to be distancing them in the matter of sheep raising. The herders across the border carried off about all the honors this year.

The number of young men, most of whom have taken one or more courses at the agricultural colleges, who were close observers and who in scores of instances picked the winners before the judges were through with the class, was larger than at any other show that has been held.

Roan King, the Shorthorn steer that won the grand championship, felt the touch of more student judges than perhaps any other creature that ever was brought to Chicago. Hundreds of hands touched him in the arena, and after he had been taken to his stall, and still later when he was sold at auction, young men paid him an amount of attention that would have completely turned his head had he been of the human instead of the beef kind.

J. L. GRAFF.



NEW 1908
DE LAVAL
CREAM
SEPARATORS

January 1, 1908 marks another great move forward in the development of the Cream Separator—the introduction of a complete new line of DE LAVAL Farm and Dairy Sizes of machines, ranging in separating capacity from 135 lbs. to 1350 lbs. of milk per hour.

As nearly perfect as the DE LAVAL machines have been before, they are now still further improved in practically every detail of construction and efficiency, and every feature reflects the past two years of experiment and test by the De Laval engineers and experts throughout the world.

The principal changes are in greater simplicity of construction, ease of cleaning and replacement of parts; less cost of repairs when necessary; easier hand operation; more complete separation under hard conditions; greater capacity, and a material reduction of prices in proportion to capacity.

The DE LAVAL was the original Cream Separator and for thirty years it has led in making every new separator invention and improvement. Every good feature is now bettered and retained and many new and novel ones added, rendering DE LAVAL superiority over imitating machines even greater in every way than ever before.

A new 1908 DE LAVAL catalogue and any desired particulars are to be had for the asking.

THE DE LAVAL SEPARATOR CO.

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in the fertilizer in generous quantities makes heavy yields of clean and sound vegetables and fruits.

Strong and lusty plants resist the attacks of insects and germ pests.

Plenty of Potash in the fertilizer assures the best crops.

Our Book, "Potash in Agriculture," is *free* to farmers. May we send it to you? Address

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We will ship you an Englewood Vehicle on approval and if not found satisfactory it can be returned at our expense. Write immediately for our free factory price lists and our new special 24-hour shipment proposition. Our other factories make Pianos, Organs, Talking Machines, Sewing Machines, Ranges, Furniture and other goods. We trust honest people in all parts of the world. Write today for free descriptive price lists and full information. Address

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MAN OR WOMAN WANTED

We want an energetic man or woman, boy or girl, in every community to represent FARM AND FIRESIDE and act as our agent. Experience is unnecessary. Your time is your own. Spare time can be profitably utilized. Entirely new proposition. Extremely liberal rewards. Send a postal today to

Merchandise Payment Department
Farm and Fireside, ~ ~ Springfield, Ohio

When writing to advertisers, tell them you saw it in "Farm & Fireside"

Do Healthy Animals Need A Tonic?

Probably not, if always permitted at liberty to secure such diet as Nature intended. We must remember, however, that the animal *domesticated* is subject to unnatural conditions. The feeder is striving to make a 1000 lb. steer in a year's time when Nature would take much longer. He is making a 200 lb. hog in one-fourth the period unassisted growth would require for the same operation. More than this, he is asking the cow, whose capacity for milk secretion was limited to the brief infancy of the calf, to do violence to Nature's plan and produce milk for eleven months. Now, of course, extra production means extra food, and extra food, if long continued, means a deranged digestive system. Hence it is easy to see that even a *healthy animal continuously overfed* needs the assistance of a corrective tonic.

DR HESS STOCK FOOD A TONIC

the prescription of Dr. Hess (M.D., D. V. S.) contains elements which the most advanced medical science recommends for the conditions we are considering—iron for the blood—bitter tonics for digestion and nitrates to expel poisonous matter. It gives appetite for roughage, thus saving more costly foods and by increasing assimilation saves nutriment that would otherwise enrich the manure heap. Dr. Hess Stock Food makes more milk, hastens the fatting of a steer or hog and is the best known tonic preparation for horses. **Sold on a written guarantee.**

100 lbs. $5.00; 25 lb. pail $1.60 Except in Canada and Extreme West and South
Smaller quantities at a slight advance

Where Dr. Hess Stock Food differs in particular is in the dose—it's small and fed but twice a day, which proves it has the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal compound and this paper is back of the guarantee.

Free from the 1st to the 10th of each month—Dr. Hess, (M.D., D. V.S.) will prescribe for your ailing animals. You can have his 96-page Veterinary Book any time for the asking. Mention this paper.

DR. HESS & CLARK, Ashland, Ohio.
Also Manufacturers of Dr. Hess Poultry Pan-a-ce-a and Instant Louse Killer.

Instant Louse Killer Kills Lice.

SUBSCRIPTION PRICE

One Year (24 numbers) 25 cents

Entered at the Post Office at Springfield, Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, do not fail to say it is a **renewal.** If all our subscribers will do this a great deal of trouble will be avoided.

FARM AND FIRESIDE

PUBLISHED BY

THE CROWELL PUBLISHING COMPANY

SPRINGFIELD, OHIO

Branch Offices: 11 East 24th St., New York City.

Tribune Building, Chicago, Ill.

ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

Better farming and more economical production means also a greater economy in human labor and more substitution of labor-saving machinery.

◈

In planning the management of your farm remember that the greatest possible agricultural prosperity cannot endure without the rearing and feeding of live stock.

◈

Now is the time when farming on paper pays. Plan your improvements and your various farm operations now, while you have time to give them careful thought and study.

◈

The soil is sometimes called the foundation of agriculture. Whether this be true or untrue, the man must be taken into account. The secret of success lies in educating the man who is to permanently develop agriculture.

◈

Over ninety-seven per cent of the structure of trees comes from the air, and by their decay is returned to the soil. Thus vegetation by its growth and decay keeps on adding fertility to our soil. This is Nature's way of restoring a wasted soil.

◈

With all our advancement there is yet room for much improvement, and all over our land there are farm homes that with little effort could have things better arranged. The little conveniences about a home are above and beyond price when they are figured at their actual value.

◈

It is estimated that the farmers will receive seven billion dollars for their crops this year, which is three hundred million more than last year; and that, too, on 745,000 fewer bushels of grain. Have you figured how much of this increase falls to you?

◈

A little well done is better than much done poorly, and for this reason the small farm is becoming popular. The difficulty of securing and retaining desirable help is causing the farmer to undertake only what he can do well with the help of his own family.

◈

Advancement is the watchword in every line of business, but especially is this true of farming to-day. Our farm homes have comforts and conveniences that were not dreamed of twenty-five years ago. The farmer of to-day, through travel and reading and intercourse, keeps himself familiar with the affairs of the world. Such men must necessarily progress.

◈

If you are intending to buy new seed corn this year, choose some that has been long cultivated in your own particular section. It takes a variety a long time to become acclimated to new conditions. Choose the best that you can find in your vicinity, and through careful selection year by year, breed it up to your ideal of what the plant should be.

◈

ALFALFA BREAD

Dr. D. F. Luckey, state veterinarian of Missouri says:

"Alfalfa is a great feed. It will not be long until the leaves and stems will be ground into a meal and alfalfa bread made from it. This bread will in a great measure take the place of milk in a well-balanced diet. I know a man will not think favorably of such food for himself and family, but it can be made very palatable.

"If for any reason a scarcity of breadstuffs should occur in the United States, and the price of flour and meal go up extremely high, I believe that alfalfa bread would be used extensively, provided, of course, that the alfalfa crops were not a failure at the same time."

This idea is not so fanciful as it may seem. Taste the leaves of properly cured alfalfa hay and you will find them very palatable, so good, in fact, that you may be disposed to waive all question about the possibilities of alfalfa bread. However that may be, you will, at least, thoroughly understand why all farm animals are so fond of alfalfa hay. It is so much more agreeable to the taste that they prefer it to any other kind of hay. They are just like the large number of human beings who prefer wheat bread to rye bread.

Now, we are referring to this subject not for the purpose of booming alfalfa bread, but to emphasize the fact that it is the greatest of feeds for farm animals. They like it. They thrive on it. We ought to grow more of it for them.

To those who sowed alfalfa last spring for the first time, and who failed to get a good stand, let us say, "Don't let one failure discourage you, nor even two, but try it again." The past season was phenomenally unfavorable to alfalfa in the humid regions. The like of it had not been experienced by alfalfa growers for a period of fifteen or twenty years previous. If weather conditions had not changed just in the nick of time, the corn crop would have been a failure. Occasional failures in standard crops do not stop farmers from growing them. Similar weather conditions of the past season may not occur again for twenty years.

◈

HOARDED CURRENCY

It has been somewhat amusing to read the appeals in the metropolitan daily press to farmers to stop hoarding money. In a general way financiers and business men know that the past year has been a bountiful one, that farm products are bringing good prices, and that farmers will have more money to spend than ever before. But why they should indirectly accuse farmers of being responsible, in any degree whatever, for the recent financial stringency is not clear.

The reports of the national banks to the comptroller of the currency revealed the hiding place of much of the currency that suddenly disappeared from circulation. It is in banks here and there all over the country. Very little of it is in farmers' stockings. Just as soon as the miser banks loosen their grip, set their excessive reserves free and expand their loans, there will be a healthy circulation of currency and the business of the country will bound to its normal volume.

* * *

In his recent address before the Pennsylvania Society of New York, Governor Hughes gave a sound opinion on the duty of the hour in regard to the business situation. He said:

"We are passing through a period which tries men's souls. Speaking here with special reference to the institutions of the state of New York, where the trouble has been most acute, I desire to say that we have reason for congratulation that with few exceptions they have been able to stand an unprecedented strain, and in our criticism of the few we must not forget to recognize the proved soundness of the many. And in order that any needed changes in our laws relating to banks and trust companies may be made we have taken steps to secure the best expert opinion and the most thorough consideration. As certain difficulties are met and remedies provided it must still be remembered that no greater danger exists to-day than the danger involved when every concern looks exclusively to its own interest regardless of the situation of its neighbors.

* * *

"It is a time for the exercise of sagacity and business prudence, which I believe will be found in the endeavor to see not to what extent credit may be restricted, but how far it may be granted; to see not how many plants may be shut down, but how many may be kept open; to see not how many men may be discharged, but how many may be kept employed; to see not how many orders can be canceled, but how much work can be carried on. It is idle for those to lament the evils of general distrust who fail to avail themselves of every opportunity to diminish it. Of course every man will act with decent regard for the essential interests confided to his care, but if the desire is to avoid any unnecessary contraction of effort and individually to the fullest extent possible to contribute to the re-establishment of confidence we shall reduce to a minimum the period of disturbance and be able at a much earlier day to welcome the restoration of normal conditions.

* * *

"And blessed with our wealth of resources, with the fruitful work of an industrious and skilful people, with an intense love of country and of the institutions designed to give opportunity to all and to guarantee to each the secure reward of honest effort, with an impatience of wrong and with an ineradicable love of justice, we may be sure that in those great communities represented here to-night and throughout our beloved land we shall in the future find richer blessings and a wider diffusion of prosperity than the past has known."

◈

PUBLISHERS' NOTES

How to get what you want when you want it.

Read the advertising columns of this issue.

If what you want is not there, write and tell us.

◈

A triumvirate is a union of three of those in authority.

FARM AND FIRESIDE is a triumvirate. It is the union of subscribers, advertisers and publishers, all working for the good of each other.

Read the advertising columns, and patronize the advertisers. Then you will see how they work for *your* good.

When you write to an advertiser, tell him you are a subscriber to FARM AND FIRESIDE, and consequently a part of the triumvirate.

◈

We want to call the attention of our readers to the fact that we are just about to start a new business department—the Merchandise Payment Department. This new department is being put into effect for the benefit of the FARM AND FIRESIDE family. Our friends are continually sending in new subscriptions to us in large quantities, and we have started this department in order to encourage this custom among our readers, and also to reward them liberally for putting their neighbors and friends in touch with FARM AND FIRESIDE. Every day we are giving away, on a small scale, merchandise to those who send us new subscriptions, but from now on we shall give them away more liberally and in larger quantities than ever. In our new merchandise payment catalogue are pictured dozens of things that you and almost every one else would like to have. Write for this catalogue right now, to the Merchandise Payment Department, FARM AND FIRESIDE, Springfield, Ohio, and learn how easily and quickly you can get many things you want for just introducing FARM AND FIRESIDE to your friends. This catalogue is sent absolutely free.

◈

THE ROOSEVELT FAMILY CALENDAR

That we offer to our readers is one of the most unusual calendars ever gotten up, and it cannot be obtained in any other way than with FARM AND FIRESIDE. We obtained the permission and authority of the President himself to use this latest and best picture of his family in this calendar. Thousands of the FARM AND FIRESIDE family have received these calendars in the last few weeks by renewing their subscriptions or subscribing anew. We have never offered our readers a gift so popular as this has proven. If your subscription expires this month, or even if it doesn't expire for two or three months yet, you ought to renew it this month, so as to get one of these calendars sure. We will put it ahead from the time when it does expire, for as long a time as you subscribe for. The Roosevelt Family Calendar Offer is limited absolutely to January 31st. Act now!

TO OUR READERS

FOR THE last year we have kept putting off from month to month any increase in the price of our subscription offers, in order to give our FARM AND FIRESIDE family everything within reason for the money they have so kindly invested with us.

You know and I know that FARM AND FIRESIDE is the biggest money's worth in the periodical field today. I wish I could tell you here what we are doing to make it more strikingly valuable during 1908 than it has ever been thought possible for a farm and family paper of moderate price to be; but that is an editorial matter, and this is just a plain business talk

We are now considering the fairest way of adjusting the subscription price of FARM AND FIRESIDE to the increased cost of production. I cannot tell you just yet what the plan will be, but I can say this much: Our special offer of three years subscription for fifty cents, as advertised in this number, is a better proposition than any other agricultural paper in the world offers, and too good a proposition for even FARM AND FIRESIDE to offer much longer. If you send in a three years' subscription now, to begin when your present subscription expires, you will be making the wisest investment you ever made in your life. I am sure you will think so every fortnight of the three years to come

Very sincerely yours,

J. C. BARNETT

Around the Fireside

Leap Year

IN ACCORDANCE with a time-honored mythical custom, the ladies of the land will, during the next three hundred and sixty-six days, exercise supreme command of the destinies of Sir Cupid's darts, and if this same molder of hearts should be more active during the present cycle it should not seriously alarm any one, for it must be borne in mind that it has been four years since he had the privilege of masquerading in female attire.

The coinage of the name Leap Year was the result of the adoption of our present calendar or manner of reckoning time, and arose from the fact that any date in such a year after the added day of February 29th "leaps over" the day of the week on which it would fall in ordinary years.

The Gregorian rule of intercalation may be plainly told as follows: Every year of which the number is divisible by 4 without a remainder is a leap year, excepting the centesimal years, which are only leap years when divisible by 4 after suppressing the two zeros. Thus, 1600 was a leap year; 1700 and 1800 were common years; 1900 a common year, 2000 a leap year, and so on. The length of the mean year thus fixed is 365 days, 5 hours, 49 minutes, 12 seconds, which exceeds the true solar year by 25.95 seconds, an error which amounts only to one day in 3,325 years. The intercalations might be so made as to make the calendar year correspond even more closely than it does now with the solar year, but no other method known could be as convenient as the Gregorian.

The Two Big Conventions

THE two great political parties have made their choice of cities for their next conventions.

The Republicans have selected the city of Chicago, and the date will be June 16th. Two other contending cities for the conventions were Kansas City and Denver, the votes being Chicago, thirty-one, Kansas City, eighteen, Denver, four.

The Democratic National Committee have selected Denver, Colorado, as their 1908 convention city, and have fixed the date of July 7th.

The Great Cruise to the Pacific

AN INTERESTED world is watching the progress of Rear Admiral Robley D. Evans and his American fighting ships on their endurance test and cruise to the Pacific. The cruise of 13,772 miles by such a large number of fighting machines is a gigantic movement, and the undertaking greater than is apparent to the civilian mind.

—Minneapolis Journal

LEAP YEAR

Bill Bryan—"Here comes Miss Democracy. Durn me, if she asks me, blame if I don't accept her"

All this distance, and for practically four months, night and day, fifteen thousand men will be on duty six hours on watch and six hours off. It will not be as though each ship were cruising on its own account, but for nearly the entire cruise the fleet will move as one ship, in column formation, uninterrupted day and night. The battleships are all heavily armored in first-class cruise and fighting form, having been overhauled at the government ship yards for the great test. The itinerary schedules the fleet to arrive at Rio de Janeiro, January 11th; leave Rio de Janeiro, January 21st; arrive Punta Arenas (Sandy Point), Chile, January 31st; leave Punta Arenas, February 5th; arrive Callao, February 18th; leave Callao, February 28th; arrive Magdalena Bay, March 14th; leave Magdalena Bay after target practise; arrive San Francisco about April 20th.

Some anxious mother with a son in Admiral Evans' fleet may entertain fears of his not getting plenty to eat on this long cruise around South America. To any such it may afford a grain of comfort to know that for the thirteen thousand men who are to take this long journey from Hampton Roads to the Pacific Coast of this country Uncle Sam has provided six million pounds of provisions, apportioned this way: One million two hundred thousand pounds of flour, one million pounds of fresh beef (frozen), eight hundred thousand pounds of potatoes, three hundred thousand pounds of smoked ham, one million pounds of vegetables (the list includes turnips, cabbages, carrots, onions and asparagus), two hundred thousand pounds of tinned corn, two hundred thousand pounds of tinned peas, one hundred and fifty thousand pounds of tinned tomatoes, one hundred and fifty thousand pounds of salt pork, one hundred and ten thousand pounds of oatmeal, one hundred thousand pounds each of rice, lard, mutton and corned beef, five hundred thousand pounds of canned fruits (including apples, peaches, pears and other fruits), one hundred thousand pounds of condensed milk, one hundred thousand pounds of coffee, fifteen thousand pounds of tea, forty thousand dozen fresh eggs, five thousand pounds of mustard, five thousand pounds of pepper and five thousand pounds of salt.

Right of Prisoners to Testify

ALBERT WARE PAINE, ESQ., author of the law giving the accused in criminal cases the right to testify in his own behalf, died the third of last month, at the age of ninety-five years, at his home in Bangor, Maine.

The law that made Mr. Paine famous was drafted half a century ago, and after many rebuffs he succeeded in having it enacted at the Maine legislature in 1864.

It was the first law of the kind anywhere, and soon the whole civilized world followed Maine's example in adopting it.

When Mr. Paine was a boy living on a farm in the town of Winslow, Kennebec County, a playmate was convicted on purely circumstantial evidence of stealing from a farmer a wallet containing a large sum of money, and was sentenced to the state prison for three years. When the boy came back from prison he was broken in health and spirit. A few weeks after his return the wallet, with its contents intact, was accidentally discovered near a rail fence, where some boards had concealed it from sight. The farmer remembered having climbed over the fence on the day that the wallet disappeared, and the boy's name was cleared. But the three years in prison had been too much for the lad, and within three months he was dead.

When Mr. Paine became a lawyer the fate of his youthful friend was fresh in his mind, and twenty-five years later he framed the law giving the accused in criminal cases the right to testify in his own behalf. Several times the bill was introduced in the legislature, but was ridiculed out of committee.

—Punch

THE SOAP-AND-WATER CURE

President Roosevelt—"As I recently remarked at Nashville, Tennessee: 'During the next sixteen months of my term of office this policy shall be persevered in unswervingly!'"
American Eagle—"Je-hoshaphat!"

Our Standing Army

NOT in many years has the War Department had so much difficulty in securing recruits as during the past year, notwithstanding, too, that never before during peaceful times has the department made so much effort to induce enlistments. Reports say that the army is now thirty-three per cent below its fully authorized strength. For the first time in the history of the army vacancies in the grade of second lieutenant are going begging. The chief cause of these conditions, it is generally agreed, is the general prosperity of the country. Labor is more or less scarce, and the higher wages in reach of the civilian are very attractive. Aside of the thirty to fifty dollars a month and board that farm hands are receiving, the thirteen dollars a month of the soldier greatly suffers by contrast.

Outlook for Inland Waterways

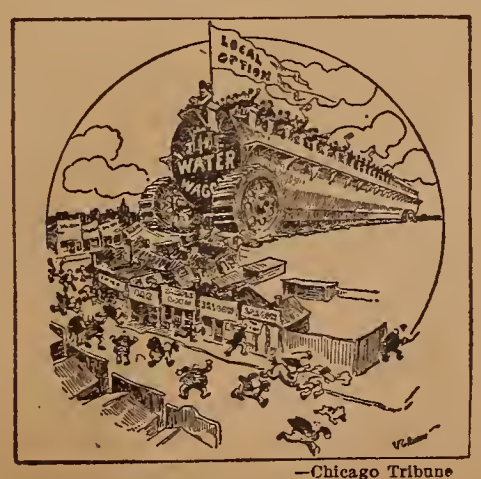
TO STOP and think of the many and great natural waterways of this country, a person cannot help but marvel at them and the endless possibilities that are held out for the extension of our inland water systems. This country is truly in its infancy with regard to inland water transportation, and within the next ten or twenty years we shall probably see realized the dreams of ships loading at Chicago and entering the very hearts of central Asia and Europe.

The subject, while an old one, has never been given the genuine practical thought and action that has come to it as a result of the united movement on the part of interested states. Things have changed since Thomas R. Reed said, "The Missouri is not navigable, and the Mississippi ought not to be." That statement was made before the unjust rebating systems were exposed and the people awakened to the evil effects of railroad conjestion.

Some far-seeing statesmen of the past, however, realized the importance of internal water communication. Washington himself comments Frederick J. Haskin, was the father of the idea of a canal from the Potomac to the Ohio. He also secured the charter for and was the first president of what afterward became the Erie Canal. Madison urged a channel for light-draft war vessels from the Gulf of Mexico to Lake Michigan, thus being the father of the "fourteen feet through the valley" idea. Calhoun planned a canal between Pittsburg and Lake Erie along the identical route now being proposed for such a canal.

The country is awakening to the necessities of the hour, and under the stimulus of the River and Harbor Congress there may be a hastening of the date of completing the more important projects. Philadelphia is urging a twenty-seven-foot channel across New Jersey to New York. Boston wants one from New York to Boston. Baltimore is asking for one from there to Philadelphia, and Pittsburg is figuring on one to Lake Erie and another to Baltimore. Cincinnati wants one to Toledo, and Chicago is bound to get in touch with deep-water via her drainage canal and the Illinois and Mississippi rivers. Some of these days Duluth and Minneapoplis will get the canal they are seeking. At the same time there are vast demands for an inland waterway for the coastwise commerce from Boston to Galveston.

There are only a few links to supply, and it takes no prophet to see that the day is near when they will be supplied.



—Chicago Tribune

THE NEW JUGGERNAUT

Roosevelt Stands Pat

PRESIDENT ROOSEVELT set at rest the third-term talk that has worried him, as well as many Republican and a few Democratic candidates for the presidency, by his declaration during the past month that he is not a candidate and would not accept the prize under any circumstances, stating that he has not in one particular changed his mind with reference to his statement made on the night of his last election, which statement was as follows:

"I am deeply sensible of the honor done me by the American people in thus expressing their confidence in what I have done and have tried to do. I appreciate to the full the solemn responsibility this confidence imposes upon me, and I shall do all that in my power lies not to forfeit it. On the fourth of March next I shall have served three and a half years, and this three and a half years constitute my first term. The wise custom which limits the president to two terms regards the substance and not the form, and under no circumstance will I be a candidate for or accept another renomination."

Postal Savings Banks

THERE isn't any doubt but that the recommendation of Postmaster-General Meyer to institute postal savings banks is gaining great popularity throughout the country, and the establishment of such banks would undoubtedly encourage economy and thrift among the people of the country, in addition to affording a place of deposits free from any possibility of doubt or suspicion for sums of money which might otherwise be hoarded and kept out of circulation.

It is recommended that the postmaster-general be given authority to designate all money-order post offices and such other post offices as may be deemed necessary to receive deposits of money for savings, deposits to be accepted in even dollars, with one dollar as a minimum; postmasters to be required to receipt for such deposits in the pass books of the depositors and to make daily reports thereof to the postmaster-general, who will acknowledge receipt of the deposits direct to the patrons; money deposited in the postal savings bank not to be liable to demand, seizure or detention under legal processes against the depositor. Withdrawals may be made at any time, subject to certain regulations. On deposits made in postal savings banks a rate of interest of two per cent is suggested, the deposits to be limited to five hundred dollars by any one person; any individual in the United States ten years old or more to be permitted to open an account in his own name and deposit to his credit an amount not in excess of five hundred dollars. A child under ten years of age to have an account opened in his name by a parent or guardian, but withdrawals are not to be made until the child attains the age of ten. That the money deposited in the postal savings banks may return to the channels of trade, authority is asked to place it in the national banks which are government depositories in the states where the money is deposited in the post offices.

Followers of congressional legislation will recall Congressman G. M. Hitchcock's appeal two years ago for the adoption of the postal savings banks, and it is to be regretted that the Nebraskan's seemingly excellent idea did not assume more positive shape at that time.

Next Big Western Fair

THE big talk in the West and Northwest is the Alaska-Yukon-Pacific Exposition, and since the Jamestown Ter-Centennial closed its eyes, those who made the Lewis and Clark Exposition such a success have started the ball rolling with renewed energy for the Seattle show, the second great world's fair west of the Rocky Mountains.

One policy in connection with the Alaska Yukon-Pacific Exposition that contrasts greatly with former American efforts along the exposition line is that no money will be asked from Uncle Sam to carry on the work. Former expositions have been aided by the government in many different ways. Outright gifts of large sums of money have been made by Congress to some world's fairs, while others have negotiated loans from Uncle Sam, some of which were paid back and some not.

Centennial of Anthracite

ON THE eleventh of February next the Wyoming Valley Historical and Geographical Society of Wilkesbarre, Pennsylvania, will celebrate the one hundredth anniversary of the first burning of anthracite coal in a domestic grate, and the celebration will be in keeping with the importance of the experiment upon the commercial development and prosperity of that part of Pennsylvania.

—Chicago Inter-Ocean

WALL STREET—"I THOROUGHLY UNDERSTAND HOW YOU FEEL"

Before the experiment, which was made by Judge Jesse Fell in his tavern in Wilkesbarre on the old Wilkesbarre and Easton Turnpike, now Northampton Street, anthracite coal was held as being of little value for it was thought that it would not burn except under forced draft. Although there were millions of tons of it lying about and under the Wyoming, Lackawanna, Lehigh, and Schuylkill regions, little of it was used for this reason, even the blacksmiths claiming that when once ignited it would not burn unless the bellows were kept continually in operation. Judge Jesse Fell did not believe this, and by disproving it in burning the anthracite coal in an open grate he opened the way to an industry which now gives employment to one hundred and sixty-eight thousand men, who produce seventy million tons of anthracite coal annually, and which has given millions of dollars in royalties to the owners of the lands.

To Our Interested Friends

ALMOST every day we receive requests from subscribers for certain information, with no signatures affixed to the requests. We are unable to answer all these through the paper, and as the writers of these letters receive no reply, they are naturally disappointed and may sometimes feel unkindly toward the paper. We are always glad to answer any questions that we can promptly and fully when the requests come to us in proper form. Always sign your name and full address, enclose an addressed and stamped envelope, and you will be sure to receive a reply.

The Imposter

By Frank E Channon

Synopsis of Previous Chapters

Amos Jackson, rich American, athlete, and his lawyer and fellow countryman, Donnaly, were returning from the Stanford Bridge Athletic Grounds, England, where the former had won great honors, when they stop a runaway tandem, make some new acquaintances, and receive an invitation to dinner. The hosts prove to he the Queen, and her uncle and aunt, of the island kingdom of Mirtheium. While on a tour of the Continent the royal party had met with a terrihle loss in the sudden death of the King, since which time return to the island had been repeatedly postponed, for it was feared that to return without a king meant the overthrow of the dynasty. Jackson in appearance proves to be a douhle of the late King, and the proposition is made that the American athlete return with the royal party as ruler of Mirtheium. During the interview a spy of the Cassell party of Mirtheium, is discovered hehind the draperies. He is captured, hranded as a lunatic, and turned over to a private sanatorium for safekeeping. The royal party, augmented hy the "Imposter" and his "new American secretary," return to the island and are welcomed with great pomp and ceremony. During the ride to the palace an anarchist hurls a bomh that drops in the royal carriage. The King, with great presence of mind, quickly throws it out of danger, saving his own life as well as that of his queen and many subjects. The bomh thrower is captured, and instead of his death sentence the King gives him "a licking within an inch of his life," and then puts him to work, hoping to reform him. Donnaly and the King decide to send to New York for the latter's pet experiment, his airship. During the review of troops, "Jessup," the dead King's faithful dog, barks viciously at the King's carriage, and by its other strange antics causes many to wonder, and raises marked suspicion upon the part of Duke Rudolf.

CHAPTER VIII.

WHO THE KING SAW ON THE TERRACE

THE episode of "Jessop's" hostility to Amos was the upmost topic of conversation when Count Benidect met Amos and the Queen after the formal dinner that evening. The King was visibly annoyed at the occurrence, and did not mince his words in stating that he was of the opinion that he should have been warned of the dog's friendliness to the late King.

"A few more 'breaks' like that," he said, lapsing back into straight American, "and the game will be up. Are there any more pitfalls, Count, into which my unwary steps may stumble? If so, you had better put me onto them right now. We had a great man once in America who said: 'You can fool some of the people some of the time, you can fool some of the people all the time, but you can't fool all the people all the time.' That is exactly our case."

The Queen fidgeted in her chair, and began to look uncomfortable, as she always did when Amos began calling spades spades in his blunt manner.

"I wish," she began, with a sigh.

"It is too late, madam," said Amos decisively, forestalling her speech of regret. "Regrets are useless now; we must play the game, and play it with all our might, and I intend to do it."

"I was about to observe," continued the Queen rather coolly, "that I wish I had thought to inform you about 'Jessop.'"

"I beg your pardon," interposed Amos. "I thought your regrets were for other reasons."

"Now really," observed the Count, looking up with a fatherly smile, "I believe you two are attaching too much importance to this somewhat trivial incident. It was unfortunate, I will admit, but I anticipate no serious consequences from it."

"I don't know, Count," said Amos in his downright way. "If you had seen the look on that fellow's face—on Duke Rudolf's, I mean—you might feel as worried as I do. It was not a pretty look, by any means, I can assure you. I mistrust him."

The Queen shot a quick, inquiring look at Amos.

"Did you notice it?" he inquired, turning toward her

She shrugged her snowy shoulders.

"I cannot say that I did, sire; no more than his ordinary look; he has always a piercing glance. I thing he was mildly surprised, that was all."

"That was all," echoed the Count.

"No," said Donnaly, speaking now for the first time, "that was not all; there was something else behind it. Count, I honestly believe that fellow suspects something."

Again the Queen directed that half-frightened, inquiring look at the speaker.

"I think you were mistaken, too, Monsieur Donnaly," she reiterated quietly.

"Well, the damage, if any, is done, in any case," said Donnaly, "and the most we can do is to be more careful in the future. That's the way I look at it."

"And a very sensible way, too," pronounced the Count.

"With your permission, I will sit a while on the balcony terrace," said the Queen, rising. "It is warm in here."

"Permit me to escort you," said Amos, rising and offering her his arm, and the two passed out into the cool of the evening.

"You may smoke," granted the Queen, reading the unuttered wish of the American, as they seated themselves on a settee on the terrace, and gazed out over the magnificent bay.

"Thank you," he replied gravely, opening his case.

There was silence for a few moments, then the Queen spoke.

"I believe," she said, "that you wish yourself well out of all this, do you not?"

He thought for a space. "No, I cannot say that I do," he replied.

"And yet," she persisted, "you hate deception as much as I. I know you do."

"Madam," he replied, "we thrashed this matter out once before. Why revert to a topic which is painful to both of us?"

"Why did you come?" she asked, ignoring his words.

"Why does the moth seek the flame?" he continued.

"Is adventure such a dazzling light, then?" she asked.

He did not reply for a moment. The lights were twinkling out in the bay. The drone and hum of the people from the town below reached them. Somewhere in the distance the strains of music from a band were audible, and inside the room, the low tones of conversation, as the Count and Donnaly sat within smoking. All was quiet and soothing.

Presently Amos looked up. The Queen's eyes were upon him. She withdrew them quickly as he raised his head.

"Yes," he said, "adventure is a dazzling flame; it draws men from everywhere, but there is sometimes a more powerful attraction than adventure. It has made demons of men, and sometimes gods of men. For it men will dare everything and do anything." He leaned forward in his chair. "You know what it is?" he questioned.

"Yes," she said, "I know what it is. I have felt it."

He started. "You!" he said hoarsely. "I thought— The Count said it was a state—"

She gave a little gasp. "Come," she said; "it is becoming chilly. Let us go in."

He offered her his arm, and they passed back into the dimly lighted room.

The Count and Donnaly looked as they entered.

"Count Benidect has been giving me such an interesting account of the first issue of postage stamps on this island. It seems that— Why, what's the trouble, old man? Anything the matter?" Donnaly broke off, looking aghast at his friend.

"Nothing," said Amos sharply. "It has been a trying day, and I think I'll turn in."

"Why, you look as if you had seen a ghost. Not sick, are you, old chap?"

"I'm all right," repeated Amos, with a forced laugh.

Shortly the party adjourned, Amos and his friend retiring to the smoking room, and the Count escorting the Queen Edna to his apartments, where the Countess wished to speak with her—regarding a forthcoming social function.

"Amos," commanded Donnaly severely, as soon as they were in the privacy of the room, "tell me what went wrong out on that porch?"

"Nothing went wrong," replied the King shortly.

"'For you,' he said, 'for you I would do anything, go anywhere'"

"Yes it did. You can't fool your uncle, old man. Now out with it!"

"Why, I merely discovered that I've been a fool."

"Hum, I could have told you that without the trouble of your chasing yourself out there. When you want information of that character, just come to me in the future. It's the girl, isn't it?"

"Always is a girl at the bottom of every trouble, I suppose," admitted the King sullenly.

"But in this case it's a Queen as well as a girl, eh?"

"Donnaly, I wish you'd eradicate that cross-examination style of yours; it's positively maddening sometimes."

"Come," invited Donnaly, "let's take a turn out on the grounds; it'll cool you off some."

"I feel more like bed," said the King.

"I am acting as your adviser," Donnaly replied in his most severe style. "Come along!" and taking his chum's arm, they passed out, down the broad stairs, into the cool night again.

The broad terrace which flanked the western side of the palace was deserted. Only the silvery moon kept guard, but down below on the drives and walks could be heard the steady step of some sentinel, as he went his rounds, and the cheerful "All's well!" of the night watch, which he met at every other turn. The noise in the distant town had ceased. A few twinkling lights showed where some belated household still lingered, and now and then a hurried step told of a pedestrian hastening homeward. Above, a glimmer of light from a window here or there marked the outlines of the great palace, while afar out on the bay the scintillating light of the "Homer Rock" flamed out with mechanical regularity. A small brig was hopelessly becalmed in the far roadsteads, and a tramp steamer was slowly feeling her way out.

The two friends stood silently, arm in arm, drinking in the cool night air, each lost in his own thoughts.

It was Donnaly who first broke the silence.

"Old man," he said, speaking almost tenderly, "you're bit, aren't you?"

Amos withdrew his arm roughly, and almost glared at his chum.

"Who said so?" he demanded.

"No need for any one to say so. I know. I'm not blind. It's Miss Asht—I mean the Queen Edna."

"Well," asked Amos, "what of it? What if I am?"

"Only this," said Donnaly in his crisp, business tone. "What's the use?"

"No use," muttered Amos sullenly.

"Then forget it."

"Thanks."

"Meaning you can't, eh?"

"Jake, can a fellow stop the sun from shining? Can he prevent the tide coming in?"

"No, but he might shut his eyes for a spell in the first case, and move away in the second."

"But suppose he doesn't want to?"

"Well, then, he had better blink away until he's blind, and stay still until he drown—that is, if he's a fool."

"Tough luck either way, I think."

"No use crying for the moon, if it is the moon you are after. But look here, Amos, are you so sure it's so far away as you think? Why not go in and win. It doesn't look so hopeless to me. You're King; she's Queen. Why not marry the girl? You're stuck on her, and she—"

"That's exactly it, she isn't stuck on me. It's no go."

"How do you know that? Did she tell you so?"

"Well, she gave me to understand it, and oh, what rot you're talking, Jake. You know this thing can't go on. I can't be King here forever."

"No, not without the elixir of life is found; most people are content with a lifetime."

"But she doesn't care for me, I tell you."

"And I asked you how you know."

"She gave me to understand—"

"Oh, to blazes with what she gave you to understand. What did she say? What were her words? Did you ask her straight out, or just bungle around the bush?"

"Why, she said she knew what is was; that she had felt it."

"Felt what?"

"Why, love, you idiot, of course."

"Who did she love?"

"Why, I suppose the late King. She said—"

"Rot!" said Donnaly. "The Count told me positively that it was just simply a marriage for reasons of state. The King's dead. You can step right into his shoes if you want to."

"I tell you I can't. She loves—Hush!"

Both men came to a halt in the shadow of a huge Grecian vase. Voices were audible a short distance in front, and the glimmer of a white dress caught their eyes. Amos was backing away, but with a muttered "St!" his friend drew him farther in under the shadow. "Lie low!" he whispered. "All's fair in love and war."

Now a man's voice, deep and low, broke the silence; his words were indistinguishable. Then a soft, low ripple of words followed from the woman by his side. Both men knew that voice; it was the Queen Edna's.

"Lie low!" reiterated Donnaly, as he gripped his chum's arm.

The figures came toward them. The man was tall and straight. The woman was clinging to his arm, as if beseeching:

"Oh, do, do," she pleaded.

"For you," he said, "for you I would do anything, go anywhere."

"Then do this that I ask you."

The man bent over, and the watchers heard the soft impress of a kiss. The Queen gave a little scream, then the low tones of her escort, as he reassured her. She was still clinging to his arm. They had reached the far end of the terrace, and turning it, were lost to view.

"God!" muttered Amos, as he straightened himself and wiped the sweat from his brow.

Both men had identified the man who walked by the Queen's side.

He was Duke Rudolf of Roumania.

"There is the man she loves," said Amos, looking straight at his chum.

Donnaly bit his lip.

"Let's turn in," he said.

◈

CHAPTER IX.

THE FIRE IN THE PALACE

WITHOUT another word the two walked slowly along the terrace and entered the palace.

"I don't need you to-night," said the King shortly to his valet, who as usual was waiting around.

The man retreated; he was becoming used to His Majesty's humors by this time.

"Smoking room's the best place," said Donnaly, reading the King's wish for a quiet place. "We can talk there."

He led the way in, and as Amos flung himself wearily into a chair, he turned around and locked the door. The two Americans were alone.

"Now," he said, "what does all this mean, old man?"

The King gripped the arms of his chair, as he replied huskily:

"It means treason and treachery, that's what it means."

"Looks that way," admitted the secretary. "Things are not always what they seem at first blush. Moreover, as a lawyer, I propose to examine this case before I render an opinion regarding it. First, then, we are sure of the identity of the two we saw on the terrace. They were the Queen and Duke Rudolf beyond doubt, were they not?"

"Beyond doubt," echoed the King, gazing moodily at the floor. "I knew him for a cad the first time I saw him. But her, I never thought it of her. She acts well; exceedingly well! A fig for the lot, Jake," he cried, springing to his feet. "By the Great Lord Harry, they've got me here to play a part! I'll play it, and play it out to the last ditch. Where's the Count? I want to see him right away!"

"St, gently!" whispered Donnaly, "Some one will overhear you. Don't talk so loud, old man."

"You're right, Jake, I'll take things easily. Now what do you propose to do?"

"To pick up the case at my last question. You say you are sure it was the Queen and Duke Rudolf. All right, we'll start from there. Now did you hear anything they said?"

"Yes, I heard her say 'Oh, do, please,' and I heard him answer something about doing anything for her, and then she said, 'Do as I ask you,' and then the cad bent over and kissed her. I saw him. But it isn't what they said so much; it's the fact of her being there with him at all, and she has always led me to suppose that she despised and disliked him. You know how he stands in regard to the Count's policy, and what we all think of his intentions and purposes. He's bidding for the throne, and she intends to help him and play me double. I suppose she's told him all, and he's just waiting and watching his chance."

"In a case of this sort," remarked Donnaly in his serious, judicial way, "we must not suppose anything. We must form our opinions upon facts, and base our judgments only upon well-founded suspicions. Even then we may be wrong. We must go slow, I tell you, Amos, go slow. You never were a hot head until now. You've changed of late."

"Why, Jake," said Amos, getting back to his old slow style, "the case is as plain as a pike road. Why should she meet him out there secretly at that time unless she wished to conceal her meeting from us? Sne's trying to doublecross us, I tell you! She's trying to run with the hare and hunt with the hounds. I wouldn't have thought it of her. I can scarce believe it now."

"It looks fishy," admitted Donnaly; "but take my advice, old man, don't make any move right now. Wait and watch. Be on your guard, but don't let on."

"You wouldn't mention this matter to the Count?"

"I would not."

"Why not?"

"Because I don't see that you gain anything by it. If he's acting square, and I don't see why he shouldn't, all he could do would be to ask her for an explanation, and then the whole thing would just come to a head, and we might get caught in the deluge. If there is going to be a landslide, we want to get out before it comes, not get caught under it, don't we? Now take my advice, old chap, sleep on what we've seen and heard to-night. In the morning, with a cool head and a steady hand, we'll tackle it."

"Let it go at that, then," allowed Amos, and the two chums bade each other good-night.

The King retired to his room, but not to sleep. His eyes seemed linked to a brain of fire, and refused to close. The midnight hour had already struck when he entered his chamber, but it was past three o'clock when old Morpheus finally received him into his arms.

It seemed to Amos that he had scarcely closed his eyes, when he was awakened by a furious hammering on his door and by cries from without. His whole room was filled with a suffocating smoke; his lungs were filled with the vapor; he was gasping for breath. With a single bound he was out of bed and springing across the room. Always a good man in an emergency, with a frame of iron and nerves of steel, he was cool and collected now. He realized as soon as he opened his eyes that there was fire in the palace. His next instinct was to seek the cause of it. The alarm without told him that others were aroused. He flung open the door, and found himself face to face with his chum.

"Come on, get out quick! This whole floor's ablaze!" shouted Donnaly. "Hurry up, old man!"

Tongues of flame were bursting out of several rooms, and the main stairway at the end of the hall was a seething, roaring mass of fire. It's intense heat drove them from it.

"The other way, quick!" hollooed Donnaly.

"Easy there," cried Amos. "How about the people above? Are they out?"

"All out, I think."

"And the west wing—the Count, the Queen?"

"I don't know. I haven't been there."

A page dashed by, half crazy with fright. "Unta callops base daure (It's fell in down there)," he cried.

A deafening crash and a dense volume of smoke and angry forks of flame came from the lower end of the hall. Heartrending shrieks told that human beings were engulfed in the glowing abyss.

"Come!" urged Donnaly, catching Amos' arm.

"To the west wing," ordered the King decidedly, and he dashed down the hall, followed by his chum.

As they turned the corner a dense volume of smoke almost blinded them. It seemed impossible to proceed.

"Down! Down on your hands and knees!" cried Amos hoarsely.

Next moment the two were blindly feeling their way along. Amos had ripped a sleeve from his pajamas, which he wound around his mouth, and Donnaly was protected by a couple of handkerchiefs. Not a word could be uttered. It was a fight to a finish with man's useful servant and fearful master, Fire. Aye, not fire alone, but his more deadly ally, smoke; thick, black, suffocating smoke, that folded itself about the two men, and enwrapped them in its deadly embrace. It seemed impossible that man could live in such an atmosphere. Donnaly saw death looming up before them, and endeavored to reach his chum, and pull him back, but Amos was already fighting his way some distance in advance; he was lost to sight in the density of the smoke. There was no "yellow streak" in the secretary, but the bravest must own up to defeat sometimes. With a smothered groan of anguish, he turned back. He could go no farther; it was death to do so. As he reached clearer air again, he turned once more and tried to fight his way in; it was useless—he was beaten.

In a mad frenzy of haste he dashed through the hall into the center lobby, and leaping the steps six at a time, gained the outer hallway. Some half-formed idea of rescuing Amos from the outside by way of the terrace had entered his mind.

[TO BE CONTINUED NEXT ISSUE]

Dot Long-Handled Dipper

By Charles Follen Adams

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DER boet may sing off "Der Oldt Oaken Bookit,"
Und in schveetest langvitch its virtues may tell;
Und how, vhen a poy, he mit eggsdasy dook it,
Vhen dripping mit colness it rose vrom der vell.
I don'd take some schtock in dot manner off trinking!
It vas too mooch like horses und cattle, I dink.
Dhere vas more sadisfactions, in my vay of dinking,
Mit dot long-handled dipper, dot hangs py der sink.

"How schveet vrom der green mossy brim to receive it"—
Dot vould soundt pooty goot—eef it only vas true—
Der vater schbills ofer, you petter pelieve it!
Und runs down your schleeve, und schlops indo your shoe.
Dhen down on your nose comes dot oldt iron handle,
Und makes your eyes vater so gvick as a vink.
I dells you dot bookit it don'd hold a candle
To dot long-handled dipper, dot hangs py der sink.

How nice it musd been in der rough vinter veddher,
Vhen it settles righdt down to a coldt, freezing rain,
To haf dot rope coom oup so light as a feddher,
Und findt dot der bookit vas proke off der chain,
Dhen down in der vell mit a pole you go fishing,
Vhile indo your back cooms an oldt-fashioned kink;
I pet you mine life all der time you vas vishing
For dot long-handled dipper, dot hangs py der sink.

How handy it vas schust to turn on de faucet,
Vhere der vater flows down vrom der schpring on der hill!
I schust vas der schap dot vill always en dorse it,
Oxsbecially nighdts vhen der veddher vas chill.
Vhen Pfeiffer's oldt vell mit der schnow was all cofered,
Und he vades droo der schnow drift to get him a trink,
I schlips vrom der hearth, vhere der schil tren vas hofered,
To dot long-handled dipper, dot hangs py der sink.

Dhen gife oup der bookits und pails to der horses;
Off mikerobes und tadpoles schust gife dhem dheir fill!
Gife me dot pure water dot all der time courses
Droo dhose pipes dot run down vrom der schpring on der hill.
Und eef der goot dings off dis vorld I gets rich in,
Und frendts all aroundt me dheir glasses schall clink,
I schtill vill remember dot oldt country kitchen,
Und dot long-handled dipper, dot hangs py der sink.

Some years ago Mr. Adams published this poem, which is a travesty on the "Old Oaken Bucket," in booklet form, and in unique style, the cover being in the shape of a long-handled dipper, the bowl of which forms the book, containing a half-tone portrait of the author and several illustrations in color. Mr. Adams is more generally known as the author of "Leedle Yawcob Strauss."

The Housewife

Common Sense and Common Remedies

BY HILDA RICHMOND

Fresh Air

It is doubtful if fresh air should be classed among common remedies, since many people seem afraid of it or ignore its healing properties. Of course, since doctors and nurses have agitated the question and consumptives have been so benefited by the open-air treatment, there is an awakening on the subject to a certain extent, but not a thorough one. In fact, there are many country homes where fresh air is at a premium, though the families have every facility to air and bathe their belongings in the health-giving atmosphere. There are "parlor bedrooms" that are death traps, simply because the sunshine and fresh air are excluded, and the only reason the members of certain families survive is because they are called daily and hourly from the houses to do chores in the fresh air.

The list of things that fresh air will cure is lengthy. Headaches, provided they are not caused by indigestion, disappear when the air of the house is fresh and pure; rheumatism brought on by damp rooms is routed when the house is thoroughly sunned and made wholesome with fresh air, and dozens of other evils are driven away by sun and air. Bad temper—the worst disease any one could possibly have—yields to the curative effects of fresh air, for the soured, cranky individuals are those who never wander from their own firesides. A great many people expect to suffer about so much every winter from colds, without every thinking that most colds could be prevented by admitting fresh air. Long before winter sets in, they stuff the cracks of the doors with rags and carefully wedge the windows into place, so that not a breath of air can creep in, and then wonder how people manage to live in houses with loose doors and windows.

A careful housekeeper, who never ventured to open her bedroom windows only on calm days, said that the wind ruined her pictures and ornaments, so she had to be careful about letting in a draft. The walls were covered with bits of fancy work, pictures and dusty ornaments, all of which were out of place in a bedroom, but she preferred them to fresh air. The bedroom should be kept as empty as possible, so that sweeping and dusting and airing are easy to accomplish. A bedroom with one window should never be planned in a new house, and if such a thing exists in an old one there is all the more reason why the mistress of the house should be vigilant in allowing fresh air to sweep through every nook and corner.

And whenever possible, summer or winter, put the bedding out on the clothes line, where sun and wind can have full power to rid it of germs and the stale odor of much-breathed air. It is simply astonishing how much dust may be shaken out of bedding considered clean and wholesome by many housekeepers. Especially should little children have the benefit of well-aired rooms. If grown people want to commit slow suicide by breathing impure air, they have that privilege, but children should be protected. There are many cases where children born in the fall are never taken out of doors until the following spring, but are housed in close rooms like hothouse plants. While it isn't necessary to take delicate little ones out of doors in bad weather for the sake of fresh air, it is the duty of the mother to see that the air in the house is pure and that the baby gets out on good days.

In all lung diseases, nervousness, headaches, irritability and rheumatism fresh air is absolutely essential. And that being the case, why not prevent these diseases by keeping the air in the house clean and pure? Several times each day the house should be thoroughly aired even in the coldest weather, and the children should be encouraged to play out of doors in all weathers unless sick. Bundle them up for a romp in the snow or a run on the porch, and they will come in rosy and good tempered; but shut them up in the foul air of the house, and they will be peevish and ill humored. For the health of the mind it is absolutely necessary to have plenty of fresh air. Many people would never go insane if they permitted themselves to get out of doors and admitted the sunshine to their rooms. One morbid woman, whom her friends were sure would lose her mind, suddenly found herself compelled to be out of doors constantly, and very soon the cobwebs were all swept out of her brain. She could be morbid and gloomy when sitting in a dark room breathing foul air, but not when out in the sunshine.

A PRETTY HARDANGER PATTERN

The hundreds of sufferers who go West and Southwest in search of health each year learn lessons about living that they scorned in their old homes. Out there they live in tents or unplastered houses and keep themselves outdoors most of the day, while at home they huddled over fires and carefully excluded the fresh air. Since an ounce of prevention is worth many pounds of cure, it would be well for every housewife to keep her dwelling so fresh and pure that disease germs can find no lodgment there. By doing so the family will be much healthier and certainly much happier.

["WATER" WILL BE DISCUSSED NEXT ISSUE]

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Baby's Crocheted Sock

BY ELMA IONA LOCKE

The material required for these little socks is fine Saxony wool in two colors. In the model the colors used are pink and white—the slipper part and the scallop around the top of leg being of the pink, and the instep and leg of the white.

Begin at the ankle with the white, making a chain of forty stitches, and join in a ring. Put the needle through the second stitch of the chain, thread over, and draw it through; keep this stitch on the needle, and take up ten more in the same way.

There will now be twelve stitches on the needle, which are to be worked off, two at a time, by putting the thread over the needle and drawing it through two stitches, thread over, and draw it through two more; repeat until all are worked off.

Then insert the needle under the first little perpendicular bar made in the previous row, thread over the needle, draw it through, pick up the second little

BATTENBERG BUTTERFLY DESIGN

bar, thread over and draw it through as before; so continue until there are again twelve stitches on the needle, which work off, two at a time, as in the first row.

Make twelve rows of these little squares of Afghan stitch for the instep, then break off the thread, and begin at the back with the pink wool. Make a treble stitch in each stitch all around the ankle and instep, widening by putting in an extra treble at each corner of the toe. The next row is made in the same way.

Now make two rows of treble without any widening. Then make two rows which are to be narrowed by missing a stitch at each corner of the toe and in the middle of the back. Turn the slipper wrong side out and crochet the edges together along the bottom of the foot with double crochet.

To make the straps across the instep, use the pink wool; make a chain of nine stitches; make a treble in the fourth stitch from the needle, and a treble in each of the five remaining chain stitches. Then, beginning on the right-hand side, make a treble in each treble around the ankle, leaving the white chain on the inside. Make another chain of nine stitches at the other side of slipper, and work back on it with trebles, break off the thread, and fasten the ends on the inside. Make a row of scallops around the top of the slipper.

Now make the leg of the white wool; make a treble in each of the little white loops of the foundation chain. Make two more rows of treble around the leg. Then make a puff stitch in every other treble all around.

Puff stitch is made as follows: Thread over the needle, insert in the work, thread over and draw it through, draw the stitch out one half inch long, repeat twice, when there will be seven long stitches on the needle; thread over and draw it through all seven stitches at once, thread over, draw it through the one stitch.

For the fifth row, make a treble in each chain stitch on top of the row of puff stitches. Make one more row of trebles, then a row of puffs, two rows of trebles, a third row of puffs, and finish with a row of scallops in the pink wool.

Fasten the straps across the instep with a cord and tassels made of the pink wool, or with a narrow pink ribbon.

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Battenberg

I had a very pretty butterfly pattern in battenberg, and wished to make two pieces like it for my sideboard.

I knew it would be monotonous making two pieces alike, so I made only the one piece, cut it exactly in half and neatly hemmed the cut edges, and I had two very pretty pieces. The hemmed edge goes to the back of the shelf, and therefore is not seen.

In doing this a person saves time and patience, and that is a whole lot in making fancy work. W. E. K.

◈

A New Design in Hardanger

We illustrate here a new and very elaborate design in the ever popular and beautiful Hardanger embroidery. The pattern here illustrated, of which only a quarter is shown, is a lunch cloth one yard square and is made mostly of large squares in which small designs are interwoven, small squares, large and small stars, and is finished with scallops on the outside in buttonhole stitches, after which the border is cut out. The space between the large stars and squares is very prettily filled in by threads being cut and drawn out, and finished with a brier stitch. The designs are original and can be easily worked out by any one familiar with this popular style of embroidery. C. O'B.

Staining Woodwork

Each year, as some portions of the house need overhauling, the perplexing question, "How shall I do it?" arises.

Hard floors require oiling and rubbing twice a month to make them presentable, and every year or two they will wear off, so that a new coat of stain and varnish will be required on the worn places.

The reddish, yellow or brown tones of the stained floor can readily be matched with home-made stain composed mainly of turpentine, into which is mixed a portion of burnt umber, yellow ocher or burnt sienna, according to the tone of old stain.

Combined stain and varnish is not desirable on old floors, and is not particularly pleasing on new ones. It is always best to apply the stain first, in a thin coat, with a flat brush, and after allowing it to dry a day, go over the entire floor with a coat of hard-oil finish, or, better yet, a coat of spar composition. When mixing the stains, they should not be too thick with the coloring pigment, nor laid on too thick with the brush.

A hard-wood floor will not require staining and varnishing as often as a softer wood, and the latter kind may be greatly preserved by the occasional application of beeswax and turpentine, rubbed off with woolen cloths. The polish is prepared by adding two ounces of shaved beeswax to a pint of turpentine, and placing in a warm room or near the stove (not on it) until dissolved. It should be shaken well before applying, and it may be rubbed well into the wood with a thick woolen cloth or a stiff hair brush. In thirty minutes it will have worked into the wood sufficiently; to remove the surplus and polish the surface of the flooring use thick, dry woolen cloths. Brushes and buffers are sold for this purpose, but a very good home-made one can be constructed from a stout hoe or rake handle and a block of wood three inches high, four inches thick and ten inches long. The block is shod on the bottom with several thicknesses of felt or thick woolen cloths drawn up on the front and back and securely tacked. Over this a single or double thickness of woolen cloth or felt may be drawn and tied, and when crusted and stiffened it can easily be removed and replaced by a new one.

When a high gloss is not desired, the varnished floors may be rubbed up with a woolen rag and crude oil. The oil should not be poured on the floor, but applied with a rag, and even then not a great deal, as too much oil makes a dust catcher and will soil the edges of skirts, rugs and whatever else comes in contact with it.

Wood that has once been painted cannot be successfully cleaned off and stained, nor can a stained surface be changed in color to give really satisfactory results. Paint and varnish can be burned off, but it takes an expert to do this, and little or no satisfaction is gained by an amateur.

There are several preparations on the market to remove varnish and stain, but when removed and new stain and varnish are applied the result is not by any means satisfactory, unless in the event of desiring some of the artistic old Dutch, Flemish or "Mission" effects.

Where a direct change of color scheme is desired in an old room, and where it is impossible to remove the paint from the woodwork, all the painted surfaces of doors, jambs, surbase, window frames or any other wooden parts should be thoroughly washed with a scouring soap, then sandpapered down to remove all the brush marks or rough places. For this use No. 1 sandpaper, and when going over flat surfaces like doors wrap the paper around a block of wood and better results will be obtained. Decide on your color scheme, then purchase the dark olive green, soft old red or neutral gray, or whatever color is desired. This should be thinned with turpentine (not oil), and applied in two thin coats. When dry it will have a dead finish that is without gloss.

It is much easier to purchase the colors ground in oil in the proper shade than to mix them; but if the right shade cannot be had, then the paint must be mixed.

CROCHETED SOCKS FOR BABY

In new woods, where the stylish "weathered" effects are desired in gray, green weathered oak and silver ash, in imitation of Nature's colorings in the fields and forests, some very good results can be had by making the stains and applying them at home. For those who desire to treat woodwork, a few formulas are here given:

For the gray tones, from light to dark, add to turpentine enough gray dust, or color ground in oil, to make the desired shade when tried on a piece of wood. To hold the color fast when the turpentine penetrates the wood and evaporates, it will be necessary to add one ounce (fluid) of drier to each pint of turpentine. The stain is applied to the wood with a bristle brush, and allowed to stand for a few minutes, when the surfaces can be wiped with cheese cloth or an old towel that is soft and absorbent.

A small portion of terre verte will give the gray a slightly greenish cast which is very pleasing.

The green tone is obtained in the same manner as gray, save that olive-green dust is added to the fluid.

The silver gray is made with the gray and a small portion of white lead, to give the fluid a slightly milky appearance. Too much lead will act badly.

The brown can be had in several tones by using cappa brown, Vandyke brown, burnt umber or brown ocher tempered slightly with a dash of ivory or vine black.

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Making Pin Money

Are you interested in how the women of the farm can make money? If you are you should not fail to read the excellent suggestions published once a month in the special department on the next page.

How the Women of the Farm Can Make Money

For each plan or idea found suited for use in this department we shall be pleased to allow one year's subscription to Farm and Fireside. If you are already a subscriber, then you can have the paper sent to a friend. This, however, does not apply to extending your own subscription. If your idea is not printed within a reasonable time, it is very likely a similar idea has previously been accepted from some one else. Write plainly on only one side of paper, and enclose self-addressed and stamped envelope if you wish unavailable offerings returned. Address Editor Housewife, Farm and Fireside, Springfield, Ohio.

Mending Grain Sacks

Mending grain sacks is a much-dreaded task, but I have an easy way by using paste made of flour and water and the use of a hot iron. Turn the sack wrong side out, put paste on the patch, and place on the hole, paste side down. Iron down for a few seconds with a very hot iron, then throw the sacks over a clothes line, and leave them there until they are thoroughly dry.

I have mended sacks in this way that would have been thrown away if they had had to be mended in the old way, and I saved the money that would have gone to buy new sacks.

MRS. DAN'L KAUFFMAN, Idaho.

Shock Rugs

I have found ready sale for all the shock rugs I can make. I invade the corn field immediately after husking is over, and endeavor to make many rugs before the muddy season sets in, as they are more salable then.

MRS. J. BENIGHT, Indiana.

Duck Feathers

In reading your paper, loaned me by a friend, I became interested in the department of "How Women of the Farm Can Earn Money," so I wished to cast my "mite" with others, feeling that I might help some one else.

I have a flock of twenty pure white ducks which can be picked every four or five weeks, getting two pounds of the first-grade white duck feathers, which sell at fifty cents a pound. Then in the spring I sell their eggs at twenty-five cents per sitting of thirteen eggs. By not picking in February, one duck sometimes will lay fifty or sixty eggs.

I also raise cabbage and make it into kraut, which is easily done, and at no cost. I sell it in the spring for twenty to twenty-five cents a gallon.

MRS. LOUIE FLOREA, Ohio.

Sausage

Some time ago I noticed an article in your columns in regard to keeping sausage, and I wish to give you my method of keeping it.

Season as though ready to use then make into cakes, and fry until done, then place in layers, as closely as you possibly can, packing them in a wide jar. I usually use a two-gallon jar. As you fill in with sausage, also fill in with hot fryings until the jar is within about two inches of being full; then turn a plate over, and cover well with hot lard, thus excluding the air. This will keep for a year. It will not be necessary to replace the plate after opening the sausage, but each time it should be covered with hot fryings.

I have put sausage up this way for twelve years, and have never had any rancid or strong; on the contrary, we enjoy good, sweet sausage all summer.

MRS. JESSIE POWELL, West Virginia.

Tomatoes

I plant tomato seed in boxes about the first of February, and thin the plants so that they will become stocky. As soon as the frost is out of the ground I plant them in the garden four feet each way. If frost occurs after being transplanted, I cover them with wooden boxes. This procedure will bring very early tomatoes, and I can sell all I raise at a good round price. I have tried this for years, and though I have had large crops, yet I have never been able to raise enough to supply the demand.

MRS. H. B. SOOY, Iowa.

Crochet Work

Last winter I made quite a little bit of money crocheting opera shawls, baby jackets and hoods for my friends, and also made two dollars one day baking and getting dinner for a bachelors' thrashing crew. I could also earn money by making mittens of old coats and pants for school children, but I gave them as presents.

I pieced two quilt tops for a neighbor out of old dresses, sewed them in squares on the sewing machine, and got fifty cents each for them.

MRS. HOPE EVANS, South Dakota.

Cream Cheese

I have noticed a number who make cottage cheese to sell, but none who make cream cheese. This is a Southern dish, and is relished as a breakfast dish. The milk is skimmed, or, better, separated, then set to sour and form a firm clabber, then cut across both ways, and allowed to warm just so the whey will separate. Then fill cheese cups—which are like a tin cup, with perforated sides and bottoms, about three or four inches high—full of this cut clabber, and set in something to drain, then set in quite a cool place over night. Then take of the next morning's cream, separated and diluted two thirds with milk, sufficient to allow three tablespoonfuls to each cupful of drained clabber. Take your cups from the cool place, put them just as they are in a basket, and cover neatly. Put the cream in some vessel to carry well and pour from. These I take to town early in the morning, and find ready sale for them at five cents each at private houses, hotels and eating houses. By carrying them in their cups they keep their shape and are easy to handle. though an order can be delivered as you choose. They are delicious.

MRS. J. E. BALL, Nebraska.

Beauty Bowls

My latest venture in cleaning up a few extra pennies is filling beauty bowls for the table. If one has good taste and time it is a paying business! I use a clear glass bowl, costing about fifteen cents, and fill it with moss and vines from the woods, with a pretty fern at the top. I get one dollar apiece for them in the city. MRS. E. A. S. L., New York.

Dresser Scarfs

A good way to pick up pin money is to make dresser scarfs. Take three handkerchiefs, join together with beading, sew beading around the handkerchiefs, then gather lace about one and one half inches in width around the beading. Draw ribbon through the beading, and make artistic little bows in the corners. This makes a very handsome scarf and can be sold very readily.

I also net a neat sum in early summer by selling lettuce at the stores. The head lettuce is the best, as it usually sells for twenty and twenty-five cents a dozen bunches. MRS. H. H., Colorado.

Early Cabbage Plants

Last spring I made pin money by raising early cabbage plants for my neighbors and some friends in a near-by town. They paid me twenty-five cents a hundred for strong, healthy plants.

MRS. WADE, Texas.

Raising Calves

In every community there are people who keep cows just for their milk and butter, and who wish to dispose of the calves by the time the cow's milk will do to use on the table. I buy these calves at from one to two dollars and fifty cents each, and raise them. Sometimes there is a cow on the farm that will take the calf and raise it as her own, but I generally raise them by hand, as they learn to eat from a bucket in a few days. Last February I bought twin Guernsey calves, paying three dollars for the two. The steer I sold for eleven dollars and fifty cents, and the heifer I kept for a milk cow. I have two more Guernsey calves that I bought for one dollar and seventy-five cents each, and I have been offered twenty-five dollars for the two, but my husband says he will give twenty-eight dollars for them. These two are about three-quarter Hereford, and are beauties. MRS. J. C. S., Missouri.

Taking Subscriptions

I have taken subscriptions for papers, and not only get my own papers free of cost, but am able to send papers to my friends, earn many valuable premiums, besides cash commission. A penny saved is a penny earned, therefore if you cannot do this, get clubbing rates on the papers you wish to take, and save money by subscribing for three or five years.

M. W., Iowa.

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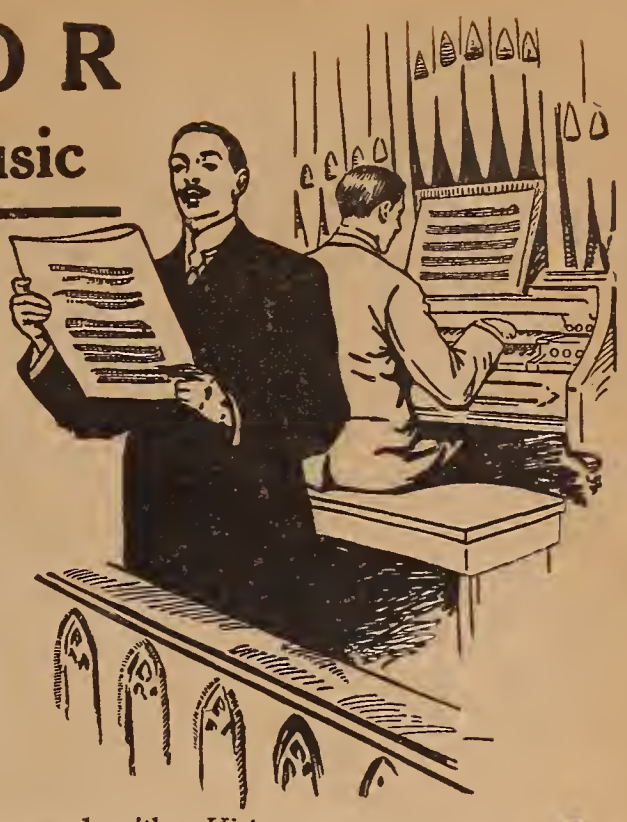

Wouldn't it be fine to sit in your home and hear the Trinity Choir sing "Jesus Lover of My Soul" and "Rock of Ages"; or the Haydn Quartet sing, "Where is My Boy Tonight" and "O That Will Be Glory For Me"; or to listen to the chants and other sacred music by the Gregorian and Sistine Choirs?

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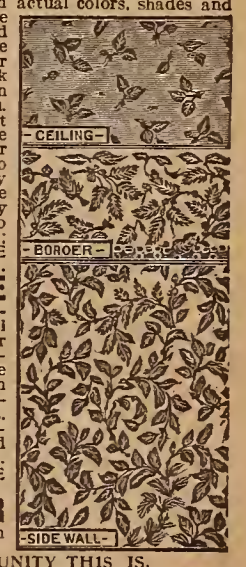

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A Page of Practical Patterns

No. 935—Child's Nightgown With Square Yoke
Sizes 2, 4, 6 and 8 years

No. 939—Thirteen-Gored Skirt Buttoned in Front

Pattern cut for 24, 26, 28 and 30 inch waist measures. Length of skirt, 40 inches. Quantity of material required for medium size, or 26 inch waist, eight and three fourths yards of twenty-two-inch material or six and one half yards of thirty-six-inch material

No. 926—Seven-Gored Band-Trimmed Skirt

Pattern cut for 24, 26, 28 and 30 inch waist measures. Length of skirt, 39 inches. Quantity of material required for medium size, or 26 inch waist, eleven yards of twenty-two-inch material, or seven yards of thirty-six-inch material

The well-dressed woman is looking with special favor upon the gored skirt for early spring wear. Plaited skirts have about run their course of popularity, so thinks the woman who cares for exclusiveness in dress. This simple design for a seven-gored skirt is extremely good style, with stitched bands of the self material. The bands may be used with the tabs or without.

No. 988—One-Piece Plaited Dress
Sizes 6, 8 and 10 years

No. 629—Tight-Fitting Corset Cover

Pattern cut for 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 36 inch bust, one and one eight yards of thirty-six-inch material, or one yard of forty-five-inch material, with three and one half yards of edging and two and one fourth yards of beading for trimming

No. 630—Dart-Fitted Drawers

Pattern cut for 26, 28, 30 and 32 inch waist measures. Quantity of material required for medium size, or 26 inch waist, two and three fourths yards of thirty-six-inch material, or two and five eighths yards of forty-five-inch material, with four and one half yards of edging and three yards of insertion

No. 632—Simple Nightgown

Pattern cut for 32, 36 and 40 inch bust measures—small, medium and large. Quantity of material required for medium size, or 36 inch bust, nine yards of twenty-seven-inch material, or six and one half yards of thirty-six-inch material, with one and three eighths yards of beading and four yards of ribbon for trimming

No. 854—Boy's Blouse Waist
Sizes 4, 6, 8 and 10 years

No. 825—Dressing Sacque With Sleeves in Two Styles
Sizes 34, 36, 38 and 40 inch bust measures

FLANNELETTE is always a satisfactory material to use for a dressing sacque, and this season it comes in the prettiest of colors and patterns. White cotton braid makes an inexpensive and attractive trimming, with velvet ribbons for neck bow and belt.

If one wants to have a more elaborate dressing sacque, washable taffeta silk is a good material to use in carrying out the design here illustrated. It may be lined or not, as preferred.

No. 927—Tucked Housework Dress
Sizes 34, 36, 38 and 40 inch bust measures

AMONG the embroidery novelties this year, what is known as corset-cover embroidery is something very new. A beading is woven in with the embroidery design so that it is all ready for the ribbon to be run through, which does away with buying the beading separately. Blind embroidery is extremely fashionable, and in all the new designs there are different-width flounces and insertions to match.

Both fine and very coarse laces are being used as a trimming for the lingerie waists this year. Cluny lace has become more fashionable than ever.

No. 1062—Misses' Corset Cover—Square Neck
Sizes 12, 14 and 16 years
No. 1063—Misses' Five-Gored Petticoat
Sizes 12, 14 and 16 years

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When ordering patterns be sure to comply with the following directions: For ladies' waists give bust measure in inches; for skirt pattern give waist measure in inches; for misses and children give the age. To get the bust measure, put a tape measure all the way around the body, over the dress, close under the arms. Order patterns by their numbers. Satisfaction guaranteed or money refunded.

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Our pattern catalogue is a big, illustrated fashion magazine in itself. It contains designs for Miss Gould's latest Paris and London fashions, and page after page of simple practical designs. It tells how to dress the baby, what style of clothes to make for your young daughter, and gives you many helpful hints about your own wardrobe, too. We will send it to you for four cents in stamps. Address: Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

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No. 1068—Corset Cover With Peplum
Sizes 32, 34, 36 and 38 inch bust measures
No. 1069—Dart-Fitted Closed Drawers
Sizes 22, 24, 26 and 28 inch waist measures

Miss Gould's Dressmaking Lesson

Tells How to Make a New and Pretty Wrapper

No. 1061—Wrapper With Round Yoke

Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, eight and three fourths yards of thirty-six-inch material, or seven yards of forty-four-inch material, with three fourths of a yard of velvet for trimming

The price of this pattern is ten cents. It can be obtained from the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

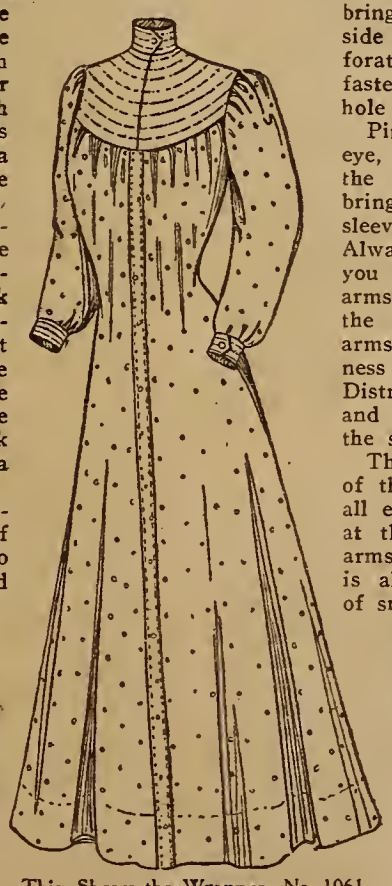
EVERY woman needs a wrapper in her wardrobe, and the one described in this dressmaking lesson has many merits all its own. It is easy to get into when one is hurried in the morning, simple to make, and yet has a smart, trim style all its own.

The design illustrated on this page is called Wrapper With Round Yoke, No. 1061. The pattern may be ordered from the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City. The price of this pattern is ten cents. Any inexpensive woolen material may be used for the gown, with velvet for the trimming, or it may be made of a wash fabric, with stitched bands of the self material or a contrasting material as the trimming.

The pattern envelope contains eleven pieces. The front is lettered V, the under-arm gore W, the back T, the collar L, the trimming band I, the belt X, the sleeve K and the wristband J. The three pieces of the lining, the front, side gore and back are each designated by a large triangle perforation.

The letters are perforated through each piece of the pattern in order to distinguish the pieces and make it impossible even for the amateur dressmaker to confuse the different parts.

Smooth the pieces of the pattern out carefully and arrange on the material with the edges marked by triple crosses (X X X) on a lengthwise fold. Place the other parts of the pattern with the line of large round perforations in each lengthwise of the goods.



This Shows the Wrapper, No. 1061, Made Up Without Any Trimming

Cut the right front like the pattern. There is no box plait on the left front, so it is cut off by line of large round perforations. The left sides of the collar, the belt and the trimming band should be cut off by lines of large round perforations.

The first step in making the wrapper is to join the back and side gores of the lining. Face the lining front from the upper edge to lines of small round perforations with tucking to form a yoke. Take up the darts in the lining fronts by bringing the corresponding lines of small round perforations together. Turn hems on lining fronts by notches and fasten invisibly. Line the under-arm gore of the wrapper as far as the waistline, indicated by line of square perforations.

Turn hem on left front by line of triangle perforations. Turn hem on right front by notches. Crease right front on line of triangle perforations and stitch one half inch in from the edge of the crease. Include the loose edge of the hem in the tuck. Gather the front at upper edge between double crosses. Arrange on lining front, bringing upper edge to line of small round perforations on the lining.

Form the plaits in the back by bringing the corresponding lines of triangle perforations together. Baste and press flat. Arrange back over lining back and side gores, matching edges and notches.

Join the pieces of the wrapper by corresponding notches. Lap the fronts, bringing the edge of the left front to the center line of large round perforations on the right front, and then fasten with buttons and buttonholes worked through the box plait.

Turn a three-inch hem at the lower edge of wrapper by lines of large round perforations. Join the collar to neck by notch. Arrange the trimming band on front, bringing the upper edge to the line of small round perforations on the lining. The band forms a finish to the upper edge of the wrapper front.

Arrange the belt around the waist, matching centers of belt and wrapper. Tack the belt securely at the under-arm seams. Lap the edges of the collar, the trimming band and the belt, bringing left side to center line of large round perforations on the right side, and fasten with buttons and buttonholes worked through the points.

For the ruffle cut a strip of material six yards long and ten and three fourths inches wide. Turn a two-inch hem at lower edge. Divide the flounce into quarters, and gather each quarter with a separate thread. The flounce when finished should be eight inches wide. Arrange the flounce on the wrapper. Divide the lower edge of the wrapper into quarters, and distribute the fulness in each quarter of the flounce on one quarter of the wrapper. If the flounce is divided in this manner it is an easy matter to arrange the fulness evenly. Finish the upper edge of the flounce with an inch-wide band of velvet.

Join the seam of sleeve as notched. Gather the sleeve at upper and lower edges between double crosses. Join the wristband to the lower edge of the sleeve as notched. Lap the ends of the wristband, bringing the edge of the lower side to line of large round perforations on upper side, and fasten with button and buttonhole worked through the point.

Pin the sleeve in the arms-eye, placing the seam at notch in the front of the wrapper, and bring the top notch in the sleeve to the shoulder seam. Always hold the sleeve toward you when arranging it in the arms-eye. Pin the plain part of the sleeve smoothly into the arms-eye. Draw up the fulness to fit the remaining space. Distribute the fulness evenly and pin carefully before basting the sleeve in the arms-eye.

There is a seam allowance of three eighths of an inch on all edges of this pattern, except at the shoulder and under the arms, where a one-inch seam is allowed, designated by lines of small round perforations.

Most of the fitting in a wrapper is done on the shoulders and under the arms, and the additional inch is allowed at these two points as a safety outlet.

One of the most attractive features of the Madison Square Patterns is their unusual adaptability. The economical woman appreciates a pattern that can be purchased for ten cents and yet may be used for several garments, each one being different.

This wrapper, No. 1061, may be made as described and effectively trimmed with velvet, silk or any contrasting color.

The busy woman who does her own work as well as her own sewing may not care for the ruffle, belt and other trimmings in making up this wrapper. They can all be omitted and the same pattern used. The untrimmed wrapper is shown on this page.

No. 934—Wrapper With Princess Back

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, eight and one half yards of thirty-six-inch material, or seven and one half yards of forty-four-inch material. The price of this pattern is ten cents. It may be ordered from the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

HERE is another attractive wrapper. This gown has a fitted princess back with plaits in the center below the waist, to give a graceful fulness to the skirt portion. The long lines of the princess are very becoming to all figures, and the front may be permitted to hang loose if that style is more comfortable. The pattern provides a lining front and under-arm gore, which fit closely and hold the garment to the figure even if the front is loose. The broad sailor collar will add a touch of originality to the wrapper, but may be omitted or made adjustable if preferred.

For housework wear the wrapper should be made of gingham or percale, some strong wash fabric which will stand well many and many a tubbing. A little white linen braid may be used to trim the collar and cuffs.

EVERY season the shirt waist becomes a little more popular than it was the year before. The manufacturers are always on the lookout for some novelty to introduce to make their waists more attractive than any others.

This spring a touch of color will be introduced in many of the new shirt waists. Sometimes it will be in the fabric chosen, and then again it will be the white waist with a bit of color showing in the trimming. If you happen to have some last year's shirt waists that are too good to discard, and yet need a new touch or two, why not try introducing a little color in some new trimming? Trimming bands around the arms-eye give the Japanese sleeve effect and will make the waist look like new if they are in some pretty, becoming shade, such as blue or pink linen on a white linen waist. These bands will stay fresh longer if they are made narrow under the arms and broader over the shoulders. If you use the colored bands, you might have new cuffs in the same color and also a belt.

A good way of remodeling a shirt-waist sleeve, especially when it is worn just above the cuff and the cuff edges are rough, is to remove the cuff, cut three or four inches off the lower edge of the sleeve, and then finish the sleeve with an armband. This will not only take away all the worn portion, but will give you one of the new, very fashionable seven-eighths sleeves.

The Marie Antoinette frills which were worn so much last season will still be very fashionable this year. They make a pretty trimming for a plain waist. The newest show a colored edge. When the frill is used to trim the front of a shirt waist, frills of the same sort can be used to trim the cuffs.

If your last year's waist, made with a frill, is now the worse for wear, cut off the worn edges, hem, and trim with narrow lace.

Farm and Fireside

HONOR ROLL

Every person whose name appears on this Honor Roll has not only already obtained a valuable prize by becoming an enrolled contestant in the Pony Contest, but is also entitled to an additional prize which he may choose himself, and has been made an active member of the FARM AND FIRESIDE Pony Club. You can get all these grand things, too, and get your name on the Honor Roll, where it will be seen by nearly three million people, if you will hustle a little. It doesn't take very many subscriptions—and think of all you get! It will put you right in line for a pony or a piano, too.

You Can Do It in a Day

It is easy to get on the Honor Roll. These boys and girls have done it and you can do it quickly, too, if you hustle and try.

Ethel Futrell, California.
Zonie Bird, Indiana.
Henry Farmer, Indiana.
Jane Hershman, Indiana.
Laurel Reed, Indiana.
Irene Smith, Indiana.
Chas. Ohloff Jr., Iowa.
Clara Dutrow, Kansas.
Chas. McCann, Kansas.
Margret F. Ribeau, Kansas.
Orrin Shepherd, Kansas.
Florence Magee, Massachusetts.
Gilbert E. Thurber, Massachusetts.
Louise T. Wetherbee, Massachusetts.
Grace E. McCallum, Minnesota.
Ruth Redfield, Minnesota.
Claudie Davison, Missouri.
Leta Gibson, Missouri.
Ethel Dudley, Nebraska.
Laura Smith, Nebraska.
LaVerne Walter, Nebraska.
Walter Clearwater, New York.
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Davis Smith, Ohio.
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Velma Williams, Ohio.
Mrs. Harriet A. Pratt, Oklahoma.
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Freeman Sarver, Pennsylvania.
Josiah Snow, Pennsylvania.
Katie Jackson, South Carolina.
Nellie Howell, Tennessee.
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The Department for Our Young People

Wood Folks at Home

BY M. W. LEIGHTON

Out on the lonely plains, with nothing but sky and prairie, rolling mile upon mile, lies the entrance to a dark burrow. Snug and warm in its lower depths are six little balls of soft brownish fur, each with a pair of sharp eyes and still sharper teeth. Over the prairie, in a great pack of twenty or thirty coyotes, the parents of these fur balls are galloping in their endless pursuit of game. "Meat—fresh killed!" is always their cry. For miles and miles they lope on absolutely tireless feet. They may be rewarded with an antelope, but more likely their "kill" will be a jack rabbit or two and a few prairie dogs. At last, however, hunger is satisfied, and the mother, remembering her little ones, leaves the pack and makes her way back across the trackless waste. As the bird flies she goes, straight as an arrow, and gives them their welcome breakfast of warm milk. When the young coyotes are a bit older they will come out of their dark nest and romp about like so many puppies. As long as they live upon milk they are innocent, gentle little fellows, but the first taste of blood transforms them into true children of the wilderness, savage and murderous.

THE MISCHIEVOUS WOOD RAT

Who can account for the tastes of this odd little forester? High up in a tree he builds his nest, round as a ball and neatly shingled with fresh green leaves. It is lined with the softest wool and silk, carefully culled, bit by bit, from surrounding plants. Should you ever have the good fortune to examine one of these nests, if it was anywhere near a habitation, you would find worked in among the leaves and twigs probably pieces of newspaper, bits of colored glass, perhaps a pair of spectacles or even a gold watch. And how did our little friend procure these strange objects, and pray why has he woven them into his nest? Is it possibly with an eye to the future amusement of his children? The wood rat has an unconquerable desire to seize and carry away every object that attracts him. He will enter a camper's shack and steal everything that he can possibly drag away, from his tobacco pouch to his latest letter from home. Mr. Wood Rat does not confine himself to the collection of pretty but useless objects. He is a good family provider, and should you visit his storeroom after harvest you would find it well stocked with nuts, seeds and grain.

WOLVERINE

Afar in the northern wilderness lives Wolverine, the glutton. When his cry rings through the silent forest all the wood folk tremble with fear. Black and sinister in appearance, he best loves the night for his murderous onslaughts. His regular diet is hare, but he is fond of varying this simple fare. During the day he sleeps in a hollow log, but immediately the sun sets he starts on his long trail. First he encounters a hunter's trap, and deftly slips out and swallows its bait of fish, which is much easier than catching any for himself. Next he reaches a tall pine tree, the favorite roost of a flock of partridges. Up this he clambers like the most expert lineman, with only some good, sharp claws to help him. He slays two birds, devours one and buries the other for a future supper. On he goes again, and soon arrives at a wood-chopper's camp. Softly and stealthily he creeps in, and seizing a side of bacon, hastily makes off with it. Such a dainty he has never tasted before. He smacks his lips with pleasure, and when it is eaten to the last bit of rind, back he goes to see if he cannot discover another dainty morsel. No more food in sight, but the glitter of the moonlight on a rifle barrel catches his eye. He hastens to investigate it, when "Bang!" echoes the loud report, startling all the wood folk and Wolverine pays with his life for his curiosity.

THE LITTLE BROWN FISHERMAN

Up in the hills where the trout stream rises this clever fellow makes his home; but, strange to say, he keeps bachelor's hall, though he has a sleek little wife and babies three. Like many of the forest mothers, Mrs. Mink prefers to bring up her family without assistance from her better, or rather her worse, half, for sad to relate, mink fathers have been known to devour their offspring.

Now, however, the small fisherman's spirits rise, for autumn is here and the time is ripe for a family reunion. As winter approaches, Mother Mink, with her little family all well grown and wearing the sleekest of fur coats, goes to seek her lord and master and proudly presents to him his two promising sons and plump daughter.

"Now, children, come with father," says he, "and learn how to catch your dinner." Together they swim cheerily down the stream, and before long each mink son proudly brings ashore a shining, wriggling little fish.

If you visit Forest Dale when the ground is thickly carpeted with snow you may be so fortunate as to see the mink family at their favorite winter sport. No troop of merry school boys enjoy coasting more than do these little brown coats as they slide down some steep hillside, one after the other, and end with a grand romp in the soft snow at its foot.

A PRICKLY CUSTOMER

Mr. Porcupine is a very unpopular member of Forest Dale society, more so than any other wood dweller, save possibly the lady who wears on her back a great white Y and carries always the most ill smelling of scent bags. When Porky is walking, or rather shuffling, through the woods, if he happens to meet any of his neighbors he does not rub noses with them, which is the way folks say "How do you do?" in Forest Dale, nor does he politely step aside till they have passed, but he firmly plants himself in the very center of the path, and if his neighbor attempts to push him gently to one side the reward is sure to be a handful of barbed quills thrust into some part of his anatomy.

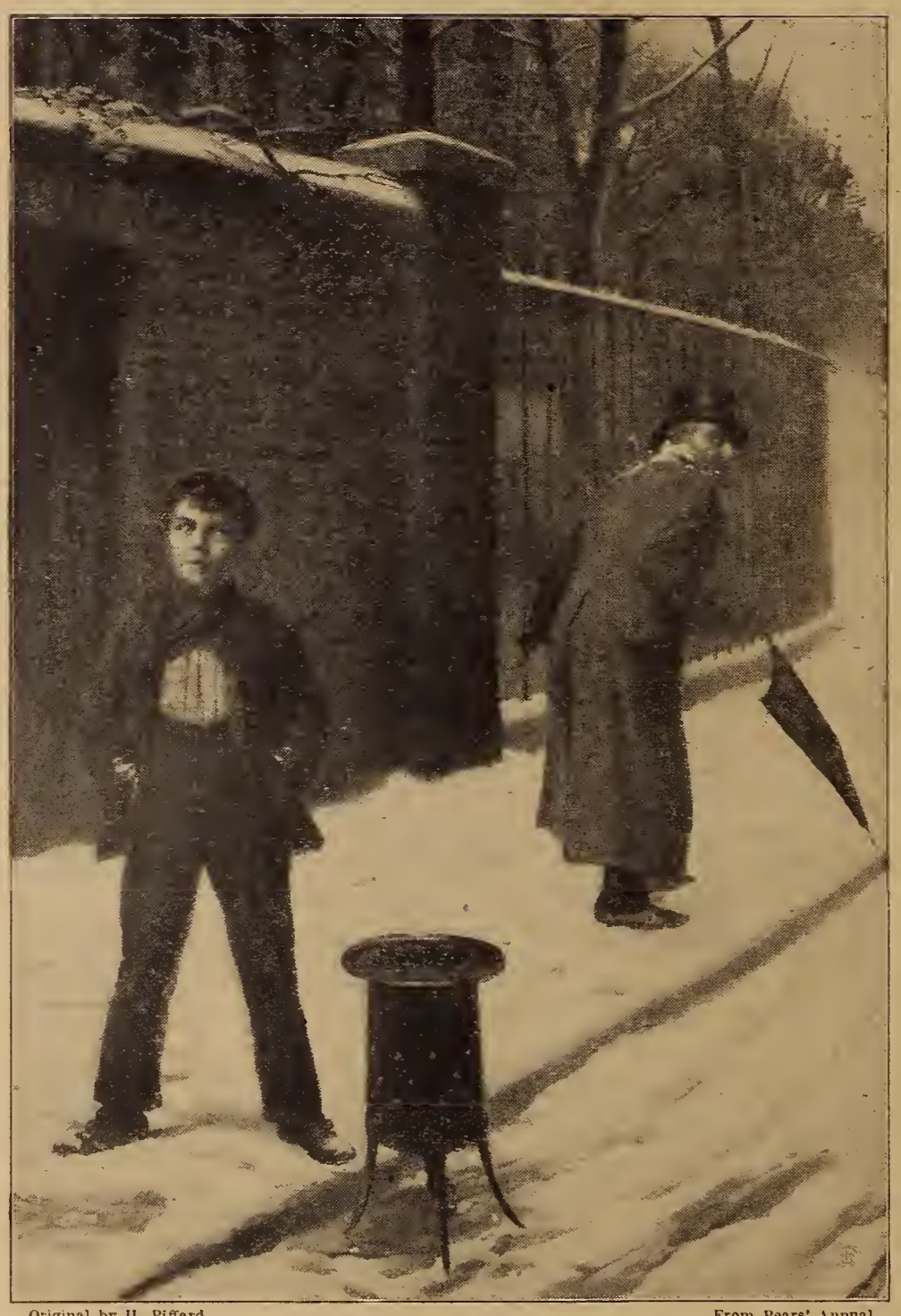
Porky fears neither man nor beast. He is a match for the fierce Canada lynx and the savage fisher. He loves solitude, though he will consent now and then to loaf away a few hours in some tree with a half dozen of his kind, all grunting, rattling their quills and gnawing bark. He is certainly no epicure, relishing all manner of forest produets, from writhing snakes to lily pads.

In the winter he makes his home in a hollow log, but, unlike many of the wood folk, he does not sleep away the cold months. Every day he crawls out and wades laboriously through the snow to his dining hall, which is generally some distance away. This is a tree, up which he climbs and gnaws enough bark to sustain him till the next meal time.

Surely Porky's unpopularity cannot be wondered at when one of his most intimate acquaintances says, "After you have known a porcupine about twenty years I guess it is time to speak to him."

THE GROUND HOG

How we rejoice if "Candlemas Day be foul and rain," for then, as the old rhyme tells us, the ground hog creeping from his burrow and seeing no shadow concludes that "winter is gone and will not come again." 'Tis no wonder he peeps out early, since he is the first of all the wood folk to go to sleep in the fall. This clumsy little "bear mouse" loves sleep far better than work at all times. But when he feels Jack Frost's very first nip he is stimulated to labor zealously in preparing his sleeping chamber. This is a burrow about three feet underground and often twenty-five feet long. 'Tis a big undertaking for the fat, lazy little fellow, but he valiantly carries it through, never failing to make a back door as well as a front, so if an enemy appears at one entrance he can escape by the other. He breakfasts upon grass and fruit while they are sparkling with dew. A long forenoon nap follows, and then it's time for dinner, which is pilfered from the nearest farm. Another nap in the warm afternoon sun and the supper time arrives. Do you wonder that the ground hog is so plump and serene? Hunters and woodsmen say that when he feels his life drawing to a close he digs a shallow hole and lies down in it to die. 'Tis surely unusual forethought for one of the wood folk to prepare his own grave.



Original by H. Piffard — From Pears' Annual

THE SNOWBALL—GUILTY OR NOT GUILTY?

WOLVERINE

WOOD RAT

PORCUPINE

COYOTE

Stories from Our Boys and Girls

We are anxious that our boys and girls shall have the greatest interest possible in the special department published for them in Farm and Fireside, and in order, also, to encourage them to literary efforts, we shall, each issue, devote at least one column of the department to short stories that our young friends may prepare.

These articles should not be of more than two hundred words at the most, and should be written plainly in ink on one side of the paper. We shall not pay for these articles, and should you desire stories returned, in case we are not able to use them, a stamped and addressed envelope should be enclosed for the purpose. Communications are not invited from persons who are more than sixteen years of age. Write plainly your name, post-office address and your age.

We shall not, of course, be able to publish all the little sketches we shall likely receive, but will endeavor to use those that will best please our young readers.

Perhaps there is some historic old place near your home that holds a story never published, some generally interesting tale that papa, mama, grandpa or grandma has told you. These and hundreds of other similar subjects may be discussed by you. Be truthful in your statement of facts, use your own language, and be brief.

Address Editor Young People's Department, Farm and Fireside, Springfield, Ohio.

To the End

"A curious story is told of a cat which lived for some years in the underground stables of a coal mine. It was always found to be in the stall belonging to an old donkey when that animal was resting from its labors," says "Chum."

"One day, owing to the carelessness of its driver in unloading it, the donkey suffered a severe strain, and was quite unable to perform its daily work.

"For nearly a fortnight the donkey lay in agony in its stable, and during that time the cat scarcely ever left its friend.

"Sometimes the pit lads would drive it away, but it would always steal back again, and when the donkey died as a result of its injuries the cat began to howl pitifully, and would not be comforted.

"But the climax came when they were taking the donkey's carcass to the surface. The cat began to scratch and fly at the men who were removing it, and became so violent that it had to be killed."

The Puzzler

Below we print a number of old-time riddles, some of which may be new to you, others that you have heard and forgotten, and still others that you remember. The answers will be printed in the next issue.

We should like our friends who are interested in this department, to send us any similar riddles with answers attached, for our possible use. We want you to have a personal interest in The Puzzler as well as the whole Young People's Department, and to this end we hope to make it of such value to you that you will not want to miss a single issue.

Can you solve the following?

1. What is the best day in the week to fry pancakes?
2. An empty barrel weighs sixty pounds. What would you fill it with to reduce its weight to thirty pounds?
3. Why is a lame dog like a problem in arithmetic?
4. What is it we haven't got, we don't want, but wouldn't take the world for if we had it?
5. If a church is on fire, why has the organ the least chance of escape?
6. What is the most wonderful animal in the barnyard?
7. A little white house with no doors and no windows yet full of meat?
8. A house full, a hole full, can't catch a bowl full?
9. What is the greatest athletic feat?
10. Why is your nose in the middle of your face?
11. What is it that stands out in the field, you can feed it and feed it and it never gets full?
12. What is the great surgical operation?
13. Why is a pug dog in the refrigerator like kissing a pretty girl?
14. What is it that goes round and round the room and stands in every corner?
15. Round as an apple, deep as a cup and all the king's horses can't pull it up?

Answer to Christmas Puzzle in the December 25th issue: Popcorn, Tinsel, Fairies, Peanuts, Stocking, Candies, Teddy Bears, Blocks, Santa Claus, Drum.

MINK

GROUND HOG

Wit and Humor

He Got His

"Deduction is the thing," declared the law student. "For instance, yonder is a pile of ashes in our yard. That is evidence that we have had fires this winter."

"And by the way, John," broke in his father, "you might go out and sift that evidence."

◈

To Be Exact

"What's that sign you're making there?" asked the grocer.

"'Fresh Eggs'," replied the new clerk.

"H'm! Make it read 'Fresh-laid Eggs' while you're about it."

"What for? Everybody knows the eggs were fresh when they were laid."

"Just so, and that's all it's safe for us to say about them."—Catholic Standard and Times.

◈

A young student, who had gone to pass a university examination had the misfortune to be "plucked." By way of breaking the news to his parents, he wrote home: "I have had a grand time here; everybody was good to me. The professors were especially kind, and asked me to come back again next term."

Will—"While I was in to market to-day, I heard a lady ask a storekeeper if the eggs that he kept were strictly fresh."

Tom—"Well, what did he tell her?"

Will—"He said, 'They certainly are, madam; the farmer that we have always been getting them from will not under any circumstances allow his hens to lay any other kind.'"

TOM—"Benedict says he thinks it's nice to be engaged."

MRS. T.—"Why, he's married."

TOM—"Of course; that's why he thinks so."

Miss Pinney—"Are you sure that your Johnnie didn't break the glass on our hotbed while throwing snow balls this morning?"

Mrs. Faith—"Yes, indeed. He not only told me he didn't do it but solemnly promised never to do it again."

MAGISTRATE—"What happened between yourself and complainant?"

O'BRIEN—"I think, sor, half a dozen bricks an' a lump of pavin' stone!"

◈

Where He Belonged

A young widow was consulting a tombstone maker about her husband's tomb. She ended the discussion with:

"And I want it to say—'To my Husband,' in an appropriate place, Mr. Slab."

"All right, ma'am," Slab answered.

And the tombstone, when it was put up, said: "To my Husband. In an Appropriate place."

First City Lad—"Look at the funny bug flying along there! It's going to light right on that shock of corn, too."

Second City Lad—"Huh! I'll just bet it's one of them huskin' bees we've heard so much about."

FIRST FARMER—"They tell me as 'ow that there artist chap as was up 'ere last year got one hundred dollars for his picture of the old 'ouse."

SECOND FARMER—"Go long with you, Mr. Stubbs. Why, the 'ouse itself ain't worth it!"

◈

Election

CANVASSER—"Is your father at home?"

CHILD—"No; daddy and mummy are both out; but auntie's in."

CANVASSER—"Has your auntie got a vote?"

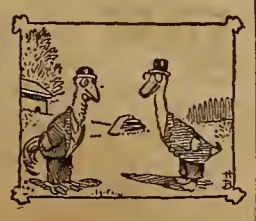
CHILD—"No; she's got bronchitis."

◈

Mr. Nuwed, arriving home late, encounters the housemaid returning from her "day out."

"Why, Jane," he says, "this is a nice time of night to come home!"

"Yes, sir," replies Jane, "What would missus say to us if she knew?"



Mr. Duck (boastingly) "I hear you have nerve enough to challenge me to a race across the pond down in the meadow."

Mr. Chicken—"Yes, sir. I'll race you across the pond if you'll allow me to set the time."

Mr. Duck (conceitedly) "All right, any old time suits me."

Mr. Chicken—"Very well, then, as soon as there is a half inch of ice on the pond we'll race."

MORE PRIZES STILL

For Our Pony Contestants

In addition to the ten ponies, the five pianos, the five hundred grand prizes and all the other prizes we originally offered, we are now giving away extra prizes **every day** to those contestants who are faithfully putting their friends in touch with FARM AND FIRESIDE. You can hear all about these extra prizes and how easily you can get one, by just writing the Pony Man, and becoming an enrolled contestant.

Plenty of Time to Win A Pony Yet

In our other pony contests more subscriptions have been sent in during the last few weeks than during twice the same number of weeks any other time during the contest. Some of the biggest winners started late—much later than you will start if you begin right now. There is plenty of time yet if you commence right away, and hustle. There are so many ponies and so many pianos offered that any boy or girl who will hustle still has a great opportunity. Don't lose it. We may never run another pony contest—certainly not as liberal a one as this. If you are not a contestant, write today and ask me about the ponies—that's all you have to do!

THE PONY MAN

FARM AND FIRESIDE Dept. J. SPRINGFIELD, OHIO

The Roosevelt Family Calendar

Free with your subscription or renewal this month only

These offers are made to both old and new subscribers, and we strongly advise you to accept one of them promptly, for at the rate these handsome calendars are going now, we will not be able to continue these liberal offers after this month.

The Roosevelt Family Calendar is so popular that we have had to supply a demand for tens of thousands of them.

It is unnecessary to call the attention of our readers to President Roosevelt's great friendship for the farmers of this country. He has fought the trusts and other enemies of farmers so bitterly that many of them are now begging for mercy, and the illegal ones have been put out of business. The country has never been so prosperous as under President Roosevelt's administration, and he is largely responsible for the high prices of farm products everywhere.

For this reason we want to send one of these handsome calendars to the home of every FARM AND FIRESIDE family.

Be sure to accept one of these offers right now. If your subscription expires soon, or if you want the Roosevelt Family Calendar, this is your very last chance to get Farm and Fireside on the present basis. Renew for several years and save money. See announcement on page 12.

Kermit Theodore Jr. Miss Ethel
Quentin The President Archie Mrs. Roosevelt

This is the picture of President Roosevelt and his family, that appears on the front of the Roosevelt Family Calendar. It was taken last August at Oyster Bay, N. Y., the President's country home, with his special permission and by his authority.

This beautiful calendar is different from any other calendar you can possibly get. It is made on beautifully coated super-calendered stock and printed in sepia so as to get the full artistic effect. And this picture is over twice as large on the calendar as it is on this page. A silk cord is attached to the top, and when the calendar is hung on the wall it will be an ornament to any parlor. In a letter from the White House, President Roosevelt himself authorized us to give this picture of his family to the readers of FARM AND FIRESIDE. Every one, whether a democrat or a republican, should have a picture of this great President and his family. You cannot get this calendar in any other way. We have had it made solely for the readers of FARM AND FIRESIDE and we shall send it prepaid and carefully packed to every one who accepts one of the offers below promptly. This offer is open to both old and new subscribers. Do not delay!

Offer No. 1

$1.00

gives you Farm and Fireside seven whole years—168 big, helpful numbers—and the beautiful Roosevelt Family Calendar, the publishers' gift for promptness. If you accept this offer, each issue of Farm and Fireside will cost you but six-tenths of a cent.

Offer No. 2

50c

gives you Farm and Fireside three whole years—72 big, helpful numbers, and the beautiful Roosevelt Family Calendar, the publishers' gift for promptness. If you accept this offer, each issue of Farm and Fireside will cost you but seven-tenths of a cent.

Offer No. 3

25c

gives you Farm and Fireside one whole year—24 big, helpful numbers, and the beautiful Roosevelt Family Calendar, the publishers' gift for promptness. If you accept this offer, each issue of Farm and Fireside will cost you but one cent.

Rush the Coupon Below Right Now This Month Sure

CUT ALONG THIS LINE AND SEND TO-DAY

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SPRINGFIELD, OHIO.

I accept your Offer No..... .....for which I enclose.....Please send FARM AND FIRESIDE and the Roosevelt Family Calendar to

Name.....

Rural Route.....

Date..... Town .....

Jan. 10 F. & F. State.....

Sunday Reading

The Secret Out

BY ALBERT E. VASSER

Would you know the little secret,
How to always happy be,
That your friends may be delighted
And from worry all be free?

Here it is; it costs you nothing:
Just acquire a pleasing mood,
Let your manners show you're loving,
And say nothing that is rude.

Like the birdies, sweetly singing,
Happy, cheerful, all the day,
Just you scatter 'round the sunbeams,
Greeting kindly on the way.

◈

Diddle Daddle

BY IHNA THAYER FRARY

THE first conversational attempt of the author's little son consisted of the phrase "Diddle daddle," which to his infantile mind seemed to express all thoughts of happiness. When, during a serious illness, he lay, all pale and wan, upon the pillow, and the parched lips seemed scarce capable of producing sound, he caught sight of his father's face through half-closed eyelids, and raising slightly, was able by great effort, in a voice almost inaudible, to repeat his little love song, "Diddle daddle."

Oh, "Diddle daddle," 'twere most absurd
If aught but a baby's lips it stirred,
But no sweeter music by me is heard
Than my little one's song,
"Diddle daddle."

To fix it's meaning we might despair;
Whence its derivation, I do not care,
But I do know that happiness dwelleth there,
When my little one cooes
"Diddle daddle."

Ah, me! when the little life hung low,
And we knew not whether 'twould stay or go,
How it seemed to us like Hope's bright bow,
When he weakly gasped
"Diddle daddle."

Oh, baby, my darling, e'en though your feet
May wander where sorrow and trial you'll meet,
I pray that your soul may still be sweet
As in days when you sang
"Diddle daddle."

◈

Never Do It

NEVER associate with bad company. Have good company, or none.

Never refer to a gift you have made or favor you have rendered.

Never look over the shoulder of one who is reading or writing.

Never appear to notice a scar, deformity or defect of any one present.

Never arrest the attention of an acquaintance by touch. Speak to him.

Never punish your child for a fault to which you are addicted yourself.

Never answer questions in general company that have been put to others.

Never, when traveling abroad, be overboastful in praise of your own country.

Never lend an article you have borrowed unless you have permission to do so.

Never call a new acquaintance by the Christian name unless requested to do so.

Never attempt to draw the attention of the company constantly upon yourself.

Never exhibit anger, impatience or excitement when an accident happens.

Never pass between two persons who are talking together, without an apology.

Never enter a room noisily; never fail to close the door after you, never slam it.

Never fail to offer the best seat in the room to an invalid, an elderly person or a lady.

Never neglect to perform a commission which the friend entrusted to you. You must not forget.

Never send your guest who is accustomed to a warm room, off into a cold, damp, spare bed to sleep.

Never enter a room filled with people without a slight bow to the general company when first entering.

Never fail to answer an invitation, either personally or by letter, within a week after the invitation is received.

Never accept favors and hospitalities without rendering an exchange of civilities when opportunity offers.

◈

A little girl in a Sunday-school class, who, when asked who was Jacob's mother, replied, "Reuben," did not show a much greater ignorance of the Holy Book than a large number of grown-up people, who neither know the names of the books of the Bible or the principal characters whose biographies are therein.—Western Christian Advocate.

From Blanket Indian to the United States Senate

THE rise of United States Senator Charles Curtis from the down-to-the-earth position of a blanket Indian to that of a United States senator is an interesting story of achievement. One has only to look at the picture of Mr. Curtis to discover that he is far from being a full-blooded Indian, but it is certain that he has Indian blood in his veins, and that until he was twelve years old he led the life of a "blanket Indian" upon the Kaw Indian Reservation in Kansas. The mother of Senator Curtis was part Indian and part French, and her husband was a white American who was a captain in the Civil War. No one could well have been poorer than was the family of Senator Curtis when he was a boy, and if he was not a full-blooded "blanket Indian" he was as poor as any Indians of that class ever were. But he had what the "blanket Indian" seldom has, and that was the ambition to be something better, and with this ambition was coupled the determination to be something better. When he was twelve years old young Curtis had his first experience living as the white boy lives. He and four or five Indian boys were taken near Topeka and lived for a time in a civilized way, but they did not take very kindly to it, and the Indian boys decided to go back to the blanket and to the idle life of the reservation. Young Curtis was half inclined to follow their example. He had enough Indian blood in him to make it difficult for him to take kindly and easily to the life of the white boy, with its round of study and work, but there was enough of the white boy in him to make him decide to remain in the city and live the white boy's life when his Indian mates went back to the reservation and lapsed again into the idleness and the ignorance of the Indian.

Young Curtis decided to become a lawyer, and he worked away so hard over his tiresome law books that he was admitted to the bar at the age of twenty-one. That meant work and lots of it. He was finally elected county attorney, and being a strong advocate of temperance, he went resolutely to work to close the saloons in his county according to the prohibition law adopted by the county. And he did close the saloons in spite of the opposition he encountered, and he

SENATOR CHARLES CURTIS

was the only county attorney who had ever succeeded in enforcing the prohibition law. Then he received the nomination for congress, and was elected in spite of the fact that his opponents sneered and jeered at his nomination and spoke of him as "that Injun." It was the turn of "that Injun" to laugh when he was triumphantly elected, and held his place in spite of the attempts of his opposers to elect some one in his place each time a new election came around. Then came a still greater triumph, and the one-time "blanket Injun" went to the United States Senate, and it is believed that he will stay there as long as he wants to because of his undeniable ability and the integrity of his character. He has a quality that is always admired in a man, and that is unwavering resolution. The shilly-shallying man, the man who is one thing to-day and another to-morrow and something else the next day, is never likely to have the confidence of the people long. He is sure to create the impression that he wants to curry favor with everybody by being "all things to all men," and no man living can do that successfully.

Now, if a boy who was once a "blanket Indian," or who for the first twelve years of his life lived the life of the shiftless Indian, can rise above such a lowly condition and become a member of the senate of the United States, what should not the better-placed American boy be able to accomplish? Our country is full of living testimonies to the truth of the old line:

"Honor and fame from no condition rise."

which means nothing more nor less than that no condition of lowliness need keep one down in a land like ours.

◈

Kindly Criticism

PERHAPS none of us would deliberately injure another, but most of us do, from time to time, by talking when we should keep still. "McCall's" very wisely admonishes us to be silent if we cannot say something nice about a friend, and reminds us how often we go heedlessly on expressing opinions or telling facts that prejudice others, and thus do harm when none was intended.

We all need a little more charity in our composition. With that the temptation to say critical or unkind things would be greatly lessened and we would make excuses where now we do not even think of them.

To make ourselves learn to do this is one of the important things in life, and a help toward accomplishing it is not only honestly to put ourselves in the other person's place when we are critically inclined, but also frankly to admit that we know nothing of the factors that governed the act.

This last is even more important than the first. With the best will in the world it is practically impossible to put ourselves in another's place unless one happens to be such a close friend that all the circumstances are known. Only then can we form an opinion that is worth the time of telling. But the fact that we know only the thing that was done, and none of the causes therefore, does not prevent us from laying down the law, and in our ignorance lies the capacity to do harm.

It ought to be as easy to say nice things as unkind ones, but with many persons this does not seem to be the case. Yet it is true that the most critical are the most ignorant, for those who know anything of life, its complications, difficulties and trials, are the most lenient and forgiving. A woman who has lived a secluded existence out of the stress of life is far more apt to be quite sure that she knows all about it and what should be done at all times than one who has lived in the thick of it and garnered knowledge. It is a woman who learns as she grows who becomes kindly, and criticism is not as often heard from her as justification.

She it is who is helpful to others and not antagonistic in superiority. If we cannot say kind things about another or cannot justify an act, at least we may keep silent about it. Even more, we may try to apply a kindly motive and not a disagreeable one. In that way certainly we shall not be harming another, and we may be doing good.

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CREDIT PLAN, installment or partial payment plan explained and also how new sewing machines are exchanged for old ones; all fully explained when you write for our new Sewing Machine Offer.

HAVE YOU ANY USE FOR A SEWING MACHINE? If you have, don't fail to cut this ad out at once and write for our new offer. If you can't use a sewing machine at any price, call your friends' attention to this advertisement. Don't buy any kind of a sewing machine at any price, for cash or on time, don't trade your old machine for a new one, don't do anything until you get our new Special Sewing Machine Catalogue free with all our new offers. We will tell you something about sewing machines you ought to know. Address, SEARS, ROEBUCK & CO., Chicago

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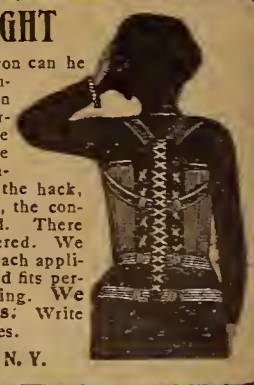

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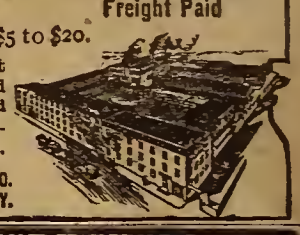

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FOOTE MFG. CO. Dept. 801 Great Agents Supply House, formerly of Frederickstown. Dayton, O.

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"THE FARMER'S BIRD FRIENDS"

I ALWAYS have been a great lover of birds, and have done much in the way of protection for them, by putting up boxes and houses for them about my home. But is it not a fact that people are carrying this bird and game fad too far for their own good? In many parts of New England deer are becoming so plentiful and so bold that it is not safe for children to travel the roads in going to and from school, as the bucks will follow and attack them. They also destroy gardens, grain fields and fruit orchards, and in this state, Vermont, I have never heard that the state has ever paid for any damage done by deer or birds. And this is not all. Wherever you find deer you will find bears, wolves, panthers, lynx and wild cats, and these animals are becoming more plentiful each year here in New England, and are doing damage to stock. Deer are protected for the sole object of furnishing sport for sportsmen, and every season there are nearly as many people injured or killed by careless hunters as there are deer killed. Is our rural property worth any more with the deer, bears, wolves and panthers than it would be without them? I think not.

Now a word about the birds. Is it not a fact that birds, in selecting insects for their breakfast make no distinction between the injurious and the useful insects, bugs, etc.? And is it not also a fact that, while birds eat very many seeds of weeds, they also distribute this same injurious seed broadcast over the country in their droppings? At the present time, in Vermont birds have more protection than does man. Man is not licensed by our state laws to destroy with impunity the property of his fellow-man, but birds are licensed to destroy our property, and we have no redress—at least, according to our state laws.

There are two sides to all questions, and the same is true of this game and bird business. I believe that according to the Constitution of the United States every citizen has the right to protect his life and property, and I further believe that it is every man's duty to do so.

I own a large cherry orchard of about three hundred trees, and my business is growing fruit. My money is invested in it. My cherry crop would be quite an important crop if I could get it. The trees each bear from one to two and one half bushels of fruit, but there are years when we cannot get a single ripe specimen of fruit from one of these three hundred trees, the birds getting every one before they are ripe. These cherries bring at wholesale four dollars a bushel. The bird doing the greatest damage is the cedar waxwing, or "cherry bird." They come in droves, and stay in the orchards from daylight until dark. They do not nest until after the cherry season, hence they have no family cares to call them home. This bird is not a song bird, neither is it, properly speaking, an insect-eating bird, yet the law of our state imposes a fine of five dollars for each one killed, yet pays for no damage done by them.

Let me ask any fair-minded person or any bird club, can we say that this is justice?

I hold that so long as the state makes laws to protect the game and birds, they should at the same time provide for the full payment of any damage caused by this protected game. It is claimed by the bird clubs that birds are the property of the state. I claim that migratory birds are not the property of the state, for they go from one state to another, often living in one state and feeding in an adjoining state. How can one state claim an ownership under such conditions? No doubt many of your readers have already formed the opinion that I am a bird slayer; but let me state that although nearly threescore years old, I have never shot, or to my knowledge killed, but one bird in my life, and that was caused by an accident when a child. Nevertheless I claim that I have a perfect legal right to shoot and kill any wild game or bird caught in the act of stealing or destroying my property—but this should be done only as a last resort.

A. A. HALLADAY.

◈

NEGLECT

I have been working all morning at a job that was made necessary just by a little neglect. I have a two-year-old boar that has always been very gentle and knew nothing of breaking through fences. The fence around his lot had needed repair for several months, but as he showed no disposition to get out, it was neglected. Yesterday he broke out. He was put back, and some work done to secure him, but it was only a short time until he got out again, going over a fence that ought to have turned him. Now it will take a very strong fence to turn him, and I have to drop my other work to fix a lot in order to secure him.

How often is it the case that only a little neglect costs us dollars worth of extra work? Then it is often the case that the damage from neglect cannot be fully repaired. Animals often become breachy from a little neglect to fix fences. Machinery is often broken from neglect to take proper precaution. Crops are damaged from some neglect of ours. Noxious weeds are often allowed to get a foothold just because we neglect to destroy them before they seed upon their first appearance.

Thus it is that we can see results of our neglect on every hand. If not our own neglect, it may be that of a neighbor—not from any intentional wrong doing upon their part, but just from simple neglect.

A. J. LEGG.

◈

NATIONAL GRANGE NOTES

H. J. Patterson, the director of the Maryland Experiment Station, is Master of the State Grange. He reports the Grange in a flourishing condition, and that farms were being divided, making a large permanent population, which was good for Grange growth.

State Master Pierce, of Vermont, reported thirty new granges, one Pomona and two thousand increase in membership as the year's work in Grange extension. C. D. Richardson, of Massachusetts, said that education was the great factor of interest of Massachusetts. State Master Gaunt, of New Jersey, reports membership of thirteen hundred and fire insurance business of eighteen million dollars.

State Master Black gave a good report of the co-operative work done in Kansas. One association had more than one hundred thousand dollars capital stock, and paid a dividend of seven per cent on stock and six per cent on savings to purchasers. It had met a great loss in a fire, but was immediately rebuilt, and business was not checked, as rooms were rented. One store had forty thousand feet of floor space. Kansas is the only state which has the co-operative feature as a main issue.

National Master Bachelder reiterated his position, made one year ago, asking for fifty million dollars for five years, to be apportioned at the rate of ten million dollars annually, for the building of good roads. He said the time was ripe for such a movement, and that the public was being educated to the need of building public highways that could be traveled all the year. He also urged the establishment of a system of postal savings banks, parcels post, and vigorously opposed the granting of ship subsidies.

Two hundred and ninety-three granges were organized or reorganized last year.

"The Grange stands more strongly today for the greatest good to the greatest number than any other institution in the land: for a true democracy, and against any kind of oppression and injustice; for the equal punishment of all lawbreakers, whether of high or low degree. Failure to impartially enforce the law is having more to do with the development of dangerous isms in this country than all other causes combined."—T. C. Atkeson, Overseer National Grange.

The following Past Masters and Past National Masters of the Grange have died during the year: Hon. J. J. Woodman, of Michigan; John T. Jones, of Arkansas; James Draper, of Massachusetts, Past National Masters, and R. P. Boise, of Oregon; Wm. Simms, of Kansas, Chas. Mars, of Michigan, Past State Masters. Geo. Fuller, of New York, and J. B. Ager, of Maryland, died during the year, in office. Jabez Robinson, one time Master of the Dominion of Canada Grange, and many years a fraternal delegate to the National Grange, also died during the year.

One of the many pleasant features of the session was the presentation by Past National Master Jones to O. S. Wood, Master Connecticut State Grange, of a handsome gold-headed cane, as a token of the splendid hospitality. Mrs. Orla Buxton, of Oregon, then presented a magnificent bunch of cut flowers and a souvenir book. Mr. Wood was taken completely by surprise. He asked each member to inscribe his name in the book, and divided the flowers among the officers of the National Grange, and the members of the executive committee of the Connecticut State Grange, who had been unfailing in their efforts to make the session a happy and profitable one.

◈

With the advancing price of land near the great markets of the North and East the farmer's occupation has assumed a more attractive outlook. Aside from this, implements of culture are being improved, better roads are being built and trolley lines and telephones are bringing the city nearer the country.

The fine quality of the tobacco produced in southern Arabia is attributed to the character of the water used in irrigating the growing plants. The small proportion of nitrates and a relatively large quantity of alkaline sulphates are the distinguishing characteristics in the Hadramant tobacco-growing district. *

MERCHANDISE AND CASH GIVEN AWAY EVERY DAY

Every day we are giving our friends merchandise and cash for introducing FARM AND FIRESIDE to their friends.

We stand ready and anxious to give you—you who are reading this—merchandise and cash rewards of almost every description, if you will induce your neighbors and acquaintances to subscribe to FARM AND FIRESIDE.

There is no "chance" or "luck" element in this offer. For a certain number of subscriptions, you will get a certain definite reward—and you will know just what you are going to get before you take a single subscription.

In addition to liberal merchandise rewards, $100 in cash prizes will be given each month to those who send us the largest lists of names.

TO ANY MAN OR WOMAN

who is willing to devote a few moments of spare time now and then, to putting friends and neighbors in touch with FARM AND FIRESIDE, this is the most liberal offer we know of. It is far different from any offer FARM AND FIRESIDE has ever made before. You are complete master of your own time, and there is no time limit.

Here is your opportunity to get without cost, some of the things you have been wanting a long time. These are our very newest offers, and the most generous we have ever made. Write today and ask for our merchandise payment catalogue. It is free. You will be surprised to see how much you can get for a little of your spare time. Address

MERCHANDISE PAYMENT DEPARTMENT
FARM AND FIRESIDE SPRINGFIELD, OHIO

You Can Get These Furs Without Cost

We will give them both absolutely without cost to any one who will send FARM AND FIRESIDE thirty-five subscriptions at 25 cents each. For fifteen subscriptions you can get the neck cluster alone, and for only twenty subscriptions, the handsome muff alone.

These furs are beautiful Sable Lynx, with animal heads as pictured, and big fluffy tails. The fur is soft as silk, and very thick and warm. It is a luxurious, rich dark brown color, almost black, and will wear excellently. The whole set is simply beautiful, and both cluster and muff are the very latest shape and style. Only thirty-five subscriptions will bring them both right to your door.

FARM & FIRESIDE
SPRINGFIELD, OHIO

Tissot's Celebrated Bible Pictures

are more wonderful and successful than any series of paintings ever produced. They have been exhibited all over the world. Over a million people have paid 50 cents each simply to see these paintings, while you can have perfect reproductions of them, which we now offer, right in your own home at practically no cost to you.

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The Wise Men on Their Way to Bethlehem

Tissot Makes the Bible Real

Tissot spent sixteen years in the Holy Land studying the country, the customs and the people. He makes real to us the great Bible characters, such as Jacob, Joseph, Moses and Ruth. Tissot's paintings are wonderful, not only in their coloring, but in their truth to nature.

These twenty-four art reproductions which we offer you now, are cabinet size, printed on coated paper, and give not only the exact coloring, but the minutest details of the famous originals. Twelve of the pictures are from the Old Testament, and twelve from the New. We believe this is the greatest offer for the money, that we have ever made the readers of FARM AND FIRESIDE. Don't lose it!

Our Offer

These twenty-four Tissot Reproductions Carefully Packed, Prepaid, and Farm and Fireside Two Whole Years

All For Only **50c.**

The regular price of two yearly subscriptions to Farm and Fireside alone

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FARM AND FIRESIDE
SPRINGFIELD, OHIO

KEROSENE ENGINES *Great Saving of Cost in Operating Gasolene Engines*—Adapted for every kind of power—3, 5, 7, 9, 10, 13, 15, 18, 20 Horse Power. Manufactured solely by THE TEMPLE PUMP CO., 15th and Meagher Streets, CHICAGO, ILLINOIS.

GETTING READY TO BUILD

Perhaps you are planning to build a barn or a new house, or it may be a smaller building. Whatever it is, you want to be as nearly ready when spring comes as you can.

If there is a cellar to be dug, perhaps there will be a chance to get part or all of it done. The stone for the wall can be drawn if they can be loosened. Perhaps some are to be used in a concrete wall, and are now lying in heaps about the fields. Sand and gravel can be drawn on sleighs without much extra work. Timber and lumber can be hauled now at much less expense than to wait until spring. All that can be done now will make so much less to do when the busy season opens.

The first step in preparing to build is to get a plan of what you want, either on paper or in your head, and you should figure out how much material will be needed.

If there is a wood lot, some of this material may be secured on the farm, especially if there is a sawmill within reasonable distance; or it may even be worth while to have some portable mill brought to the farm and set up for a time.

I have in mind one farmer who secured all timber, lumber and shingles for a large barn from his own woods. Another had all the material needed for the wall drawn where it was wanted, before the the sleighing was gone in the spring.

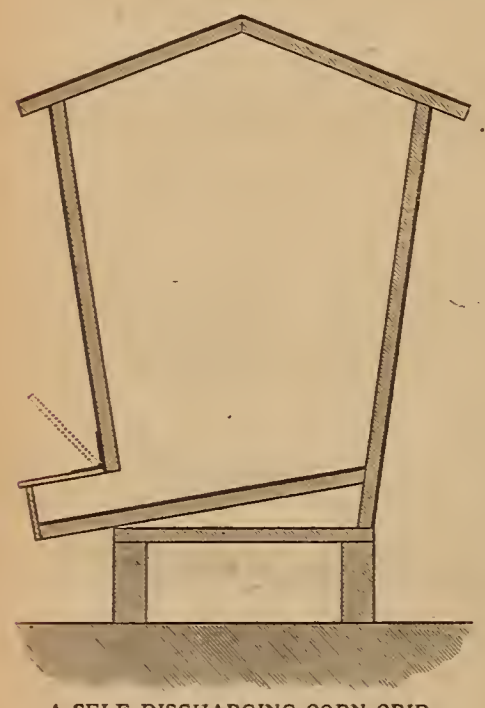
In getting material, be sure that you have enough. A few pieces more of lumber or an extra load of stone will not cost much and can always be used somewhere to good advantage, while if you lack that much it may cost you considerable. Be sure you have ready the necessary nails, hardware for the doors, needed windows and other fixtures.

JOHN UPTON.

A SELF-DISCHARGING CORN CRIB

A corn crib from which the corn may be taken when wanted, without opening any of the upper portion or without the use of a ladder or steps, may be made as shown in the accompanying cut.

The floor slopes from one side to the other, and its lower margin projects beyond the side of the crib sufficiently to



A SELF-DISCHARGING CORN CRIB

permit the use of a box in which a scoop or shovel can be used. The projecting part of the floor is made the bottom of the box. A cover is hinged to the box so that it may be turned up when corn is to be taken out, as shown by the dotted lines.

To facilitate the use of the shovel, the opening into the crib is closed for a space of two feet, either in the middle or at each end. At these closed places there will be no corn upon the floor of the box, so it will be easy to shovel out the corn.

J. E. BRIDGMAN.

This year our people will reap a veritable "golden harvest." As your busy season is now over, and the long, pleasant evenings have come, you will no doubt want many things for your amusement and comfort.

* * *

Look through the columns of FARM AND FIRESIDE at the large number of wares which merchants have laid before you. If you see anything that attracts you, write to the advertiser for particulars.

* * *

You can safely place the utmost confidence in our advertisers, for we know they are reliable. Simply mention FARM AND FIRESIDE, and they will know that you are a member of our big family and are entitled to the best service they can render.

AGRICULTURAL NEWS-NOTES

The total apple crop of the United States in 1907 is estimated at about twenty-four million barrels.

For a number of years the Thanksgiving price for turkeys has ranged from three to four cents higher in New York than in Chicago.

The finest quality of Arabian dates and figs are now grown at the United States Experiment farm in the Colorado desert adjacent to the Salton Sea.

The prune industry of Oregon is assuming vast proportions. The crop of 1907 in the Williamette and Umpqua valleys alone is estimated at over twenty million pounds.

Argentina, which is one of the leading wheat-exporting countries, is rapidly being settled by Italians, of whom there are now more than twice as many as there are of Spaniards and their descendants.

The peanut belt in southeast Virginia and northeast North Carolina produces seven eighths of the world's supply of this valuable food. The crop of 1907 is less than three fourths of an average one.

Durum wheat, as was intended by the United States Department of Agriculture, has proved a valuable grain in the semi-arid regions. It would be well not to sow it where the blue-stem and Fife wheat can be successfully grown.

Ginseng growers will find it to their advantage to ask for a list of the principal dealers at North Formosa, China. Such a list can be had of the Bureau of Manufactures in the Department of Commerce and Labor, Washington, D. C.

In Italy cotton-seed oil is largely used for table purposes on account of its wholesomeness, low cost and its actual superiority over low grades of olive oil. Refined cotton-seed oil needs only to be tried to be appreciated at its true value here.

The agricultural College at Tokyo, Japan, is now experimenting in bamboo grass with the view of making paper pulp from it. This test should be made also in the subtropical sections of the United States and our island possessions. Why destroy our forests for pulp?

Each state experiment station should have as aids in promoting agricultural progress the control of several substations or experiment farms in various sections of the state. When shown that scientific methods pay best, farmers living near by quickly adopt them. *

Dazzling White Dishes

SOAP does not cleanse as thoroughly as it should. If you could see your dishes and household utensils through a microscope, you would realize the truth of this statement.

GOLD DUST

not only cuts dirt and grease with scarcely any rubbing, but is an antiseptic that cuts deep after every minute, and oft-times hidden, impurity. GOLD DUST sterilizes your kitchen things and makes them wholesome and sanitary.

GOLD DUST, too, is the greatest labor saver ever known, and will enable you to wash your dishes in half the time consumed by the soap method.

No soap, borax, soda, ammonia, naphtha, kerosene or other foreign ingredient needed with GOLD DUST.

For washing clothes and dishes, scrubbing floors, cleaning woodwork, oil cloth, silverware and tinware, polishing brasswork, cleaning bath room pipes, refrigerators, etc., softening hard water and making the finest soft soap.

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The N. K. Fairbank Company
Chicago
Makers of Fairy Soap

"Let the GOLD DUST Twins do your work"

NEW AND COMPLETE POULTRY BOOK

WITHOUT COST TO OUR READERS

This book contains over 200 pages of the most valuable information ever gotten together for practical poultry raisers. It is profusely illustrated with designs made especially for this book. The Incubator, Brooder, Breeds, Diseases, and How to Market the Product are some of the topics discussed. Special chapters are devoted to Turkeys, Ducks, Geese, Pigeons, etc. For the purposes of the general poultry raiser, it is the most complete and most practical poultry book in existence. A copy of it should be in the hands of every one of our readers.

OUR OFFER

This 200 page book will be sent prepaid for only one **new** subscription to FARM AND FIRESIDE, or for one **renewal** and only 5 cents extra. Send all orders to

FARM AND FIRESIDE, Springfield, Ohio.

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Oregon, Washington and Idaho

These great states contain 20,000,000 acres of ***fine*** government land, from which 160-acre tracts can be had for a simple fee of about $22.

There are hundreds of thousands of acres in the "school section" of Oregon which can be purchased for $2.50 per acre. Why don't you go out and see for yourself? It isn't what you ***read*** but what you ***see*** that will convince you that you can own good land out here and forever get rid of the landlord.

The way to get there is via the

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Write for full information to

E. L. LOMAX, G. P. A.,
Omaha, Neb.

FARM AND FIRESIDE

AN ILLUSTRATED FARM AND FAMILY JOURNAL

EASTERN EDITION

Vol. XXXI. No. 8 SPRINGFIELD, OHIO, JANUARY 25, 1908 TERMS {25 CENTS A YEAR / 24 NUMBERS

U. S. Department of Agriculture

What 1908 Promises to Farm and Fireside Readers

NOT if we had a dozen pages could we tell our big family of all the thought and effort we are putting into Farm and Fireside to make it more strikingly valuable during 1908 than it has ever been considered possible to make a farm and family paper of moderate price. All we can do is to give you a few suggestions of the good things that Farm and Fireside will print during the coming months, and tell you that we are striving to make each issue more interesting, more helpful and more valuable than the one before it. We are not building Farm and Fireside alone for 1908, but for a great many years to come.

Illustrated Special Articles

In this line the following are a few of the eminent agricultural writers who will contribute their practical knowledge to Farm and Fireside this year:

R. A. Moore, Professor of Agronomy, University of Wisconsin.

Chas. S. Plumb, Professor of Animal Husbandry, Agricultural College, Ohio State University.

Dr. H. J. Waters, Dean of the College of Agriculture, and Director of the Agricultural Experiment Station, Missouri.

Dr. E. A. Bryan, President of the State College of Washington, and Director Agricultural Experiment Station.

Prof. Clinton D. Smith, Director Michigan Agricultural Experiment Station.

Dr. Charles F. Curtiss, Dean Division of Agriculture Iowa State College, and Director Agricultural Experiment Station.

Dr. William P. Brooks, Director Hatch Experiment Station of the Massachusetts Agricultural College.

Some Farm Topics

Among the vital subjects to be handled in the near future are the following:

"Barley Culture," "Irrigation in Colorado," "Millets for Feed and Forage," "Raising Baby Beef," "Producing Young Lambs for Family Trade," "Producing Good Cheese," "Sheep on the Farm," "The Dairy Industry," "Grades and Cross Breeds in Hogs," "Coburn on Alfalfa," "Care of Young Colts," "Maintaining Soil Fertility," "Testing Seed Corn," "The Rocky Ford Cantaloup," "Developing a Good Dairy Cow," "Spraying Mixtures for Garden and Orchard," "Breeding, Growing and Training the Mule," and a great many others. Each one of these articles is written by a specialist in its particular line.

The Departments

There will be the twelve departments—covering every field of farm activity, from plowing to cooking—departments not only for the farmer, but for his wife and children, too. There will be two or three new departments, one on Farm Management, which will deal with the business problems of the farmer; another, to be called "In the Back Office," which will be devoted to business talks from time to time among ourselves—between you, the readers, and us, the publishers. We want you to take part in this department and make it *your* department.

We are also giving much more of time and money and effort to the departments which are in woman's sphere. Good as they have been in the past, the improvements during 1908 will be strikingly noticeable.

Interesting Magazine Features

Then there are lots of other things that we have planned for Farm and Fireside this year that you haven't heard about yet. For instance, we are going to tell you about the home life of several men who are doing things in the American agricultural world. A few of the other proposed features are "The Secretary of Agriculture and His Work," "Making the Home Beautiful," "Remarkable Careers of Writers Who Have Brought Entertainment and Comfort to American Homes," "The Benevolent Work That is Being Done Toward Caring for the Nation's Poor Children by the Rich and Generous," "Common Sense and Common Remedies," "Specific Direction for Their Proper Application," "The Religious World," "The Church on Wheels, and the Progress of God's Missionary Work Both at Home and Abroad," "The Hidden Mysteries of India"—telling in picture and story the fanatical customs of that peculiar English possession. All of these and many more are the articles of interest that will help our big family pass many an evening and Sunday pleasantly and profitably in 1908.

The Fireside Magazine Section

was an original idea with Farm and Fireside. In it we shall print during 1908 the very best stories we can get. During the past two years Farm and Fireside has been way ahead of the field in providing interesting stories and articles for our thousands upon thousands of readers, but we are going to make 1908 our banner year—better than ever. Farm and Fireside has always believed that the ideal farm paper is one for the farmer first, but for his wife and children, too—a paper for the whole family. Among the excellent stories to be printed in the near future are the following:

"Salome Burke's String of Pearls."
"Doctor Burton's Prescription."
"Buffeted by Fate."

The Fashion Pages

And don't forget the fashion pages. Miss Grace Margaret Gould, the great fashion authority, is devoting much of her time these days to reproducing and adapting the latest Paris and New York styles so that they will be suitable and practical for the American women the country over. Miss Gould has made patterns of every design, so that you can make the dresses right in your own home without the slightest fear of a mistake. To any girl or woman interested in having pretty clothes at very little cost, these fashion pages will be worth many times the subscription price of Farm and Fireside.

Your Best Investment

All this is but a glance at Farm and Fireside as we have planned it for 1908. If we could tell you *right here all* the good things and new things that our big family will get this year, you would agree with us that no other farm paper in this country, no matter what its price, is giving its readers so much helpful, interesting and valuable reading matter as Farm and Fireside. Now is the time to "make hay while the sun shines" by sending in your subscription or renewal for three or seven years, while these prices last. THE EDITORS.

Be Sure to Read Our Liberal Offers on Page 21

AGRICULTURAL-EDUCATION PROBLEMS

THAT the present farm boy, the farmer of the future and on whom the further progress in the development of farm methods and farm practises depends, needs a higher and more thorough specific education than he, as an average, has heretofore enjoyed, is generally conceded.

The great problem has been, and still is, how to give it to him. The common rural schools are already overburdened with studies which take all of his time and attention. Such, at least, is the claim. There is no room in rural schools for special farm training. Neither are there teachers, competent to teach farm practises. The scheme, therefore, is impracticable. Neither does it appear to be desirable.

In the country school, as well as in the city school, all pupils should be on an equal footing. It would be absurd to teach the details of common farm practise, as well as to teach the details of the carpenter trade or of any other particular occupation which the pupil might select. The proper aim and province of the country school or any other common school is to lay the foundation upon which all chances for the boy's thorough and practical training — agricultural, mechanical, commercial, as the case may be—must rest.

First of all, of course, stands a fairly good knowledge of his own language. But it is not enough that he can read, write, do some simple problems in arithmetic, and have a general idea of the location of the various countries and bodies of water on our earth, or of that of the earth in relation to the sun and moon and stars, etc. This is a practical age. Electrical, mechanical and chemical problems reach right down into our everyday life and activities, on the farm, perhaps, to even a greater extent than in many other lines of work.

The boy who leaves school at sixteen should not be allowed to stand with open mouth, helplessly facing some of these common farm problems, or listen to the discussions at farmers' meetings, without a full understanding of the meaning of the terms so freely used there. The enlargement of the boy's vocabulary, so that it includes the meaning of the simplest terms in elementary physics and chemistry—steam, steam power, horse power, gravitation, adhesion, capillary attraction, hydraulic ram or other devices, oxygen, hydrogen, nitrogen, compounds, etc.—is plainly a matter for the common school, both in city and country, and there is plenty of time in the school life of the boy, from his twelfth to his sixteenth year, to acquire all the information on such matters in a few lessons weekly, and with the help of some simple apparatus which aids in making such lessons extremely interesting and impressive. A cheap working model of a steam or gasoline engine; of a dynamo or force pump; some simple electrical devices; a few practical demonstrations in elementary chemistry, such as the decomposition of water and the like are things which would make the few lessons a week so interesting that you could not keep the boy away from school and from these lessons with a club.

This is not theory. I have been through the mill. And when the young man goes out into the world, after his school years, he will find himself ready to go at the various problems which the farm or the shop, or the store, or daily home life presents to him, understandingly and eagerly, and to conquer difficulties, which are well-nigh insurmountable for young or old farmers lacking this preliminary training. Give the country boy a chance. Give him the foundation. He can be trusted to work out his own agricultural or industrial salvation.

THE BAILEY IDEA

The suggestions recently made by Doctor Bailey, the accomplished dean of the College of Agriculture at Cornell University, are gradually being put to the practical test. Whether the changes in our text books or in methods of teaching, which he advocates so urgently, will revolutionize our farm practises in ten or twenty years, as he so confidently predicts, or even make a perceptibly marked impression on them, remains to be seen. The changes are mainly in two directions.

In our older reading books the subjects of the reading matter were mainly taken from the field of standard literature—poems, fiction, tales of war and heroism, general history, sentiment, adventures—anything and everything selected with the one object, namely to present suitable reading matter and samples of good language. Doctor Bailey's idea is to use these reading lessons as a means of giving to the pupil information on rural topics, thus keeping his mind on matters of rural and home interests rather than occupying his thoughts with war stories or tales of profitless adventures.

It is true that there should be variety. But the activities of the farm should play a leading part in these respects. Our older arithmetics contained mostly examples and problems of the store and city life generally, and were well calculated to turn the pupils' thoughts away from the farm and toward city occupations. The Bailey idea is to replace a good share of the examples and problems of this kind by those relating to farm and farm life. And so I now find in the arithmetics at present in the hands of school children in our country schools plenty of references to hay, eggs, milk, butter, chickens, feeding stuffs, cattle, sheep, horses, fields, pastures, orchards, trees, fruits, vegetables, etc. This change is sensible and desirable. What the ultimate result will be we shall see after a while. But it seems that there is at least a chance for steady progress.

The second change already referred to is in the training of the teachers for the task of giving instruction in matters pertaining to agriculture. A few weeks ago I received a copy of the program of the proceedings at a teachers' institute in our school commissioner's district (Niagara County, New York). It contained the announcement of so many lectures on rural subjects (soil, bee keeping, orchard management, spraying, etc.) that I turned back to the first page, thinking I had made a mistake and had gotten hold of the program of a farmers' rather than of a teachers' institute. This seems to me to be going pretty close to the danger line.

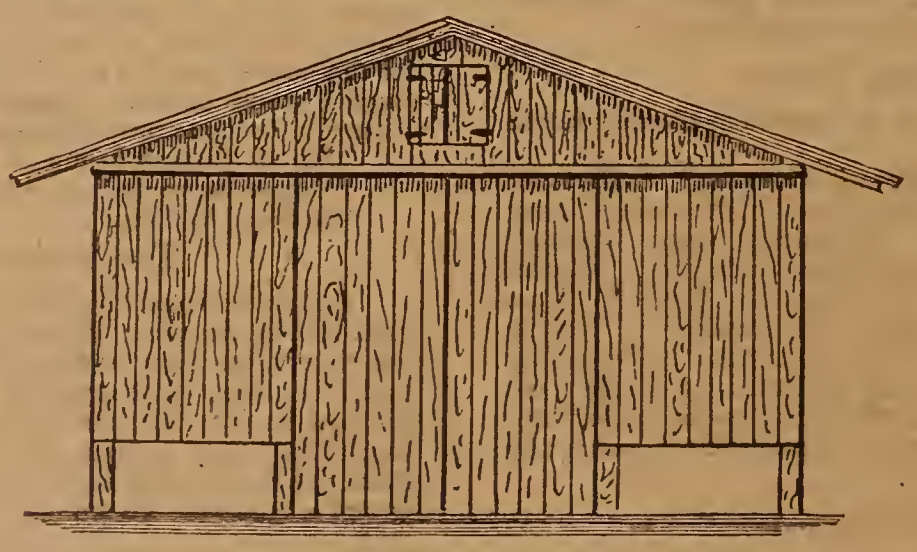
I question very much that it is the place of the teacher in a common school to teach good farming or any of the details of farm operations, or that it is particularly necessary for the teachers to understand much of farming as a business. Legitimate, however, are determined efforts in the direction of making the teachers competent to lay the first foundation, to teach the rudiments of the physical and chemical sciences in a practical, matter-of-fact way, so that the farm boy may learn the characteristics and qualities and composition of soils, water, air, etc., and understand the natural phenomena around him, such as combustion, the manifestations of heat, of electricity, magnetism, and all these things, and become familiar with the terms and their meaning of things with which he will have to deal in his farm and shop and home-life operations and activities when he takes up that kind of work as a life business. It will be a big help to him in after-life. In many of the common things of the farm, may this be dairying, poultry keeping, bee keeping or fruit growing, the intelligent farm boy is liable to know more than his city-bred teacher. There may be wasted effort in the present proceedings.

T. GREINER.

AN IMPROVED CORN HOUSE

The waste caused by vermin in the corn crib is frequently very serious. Rats are the especial enemy of the farmer in this respect, and any means whereby their ravages may be prevented will be productive of a great saving.

The burrowing rat, which makes its nest beneath the buildings or rubbish piles, does the most mischief in the corn house, and unless it is so made that there are no hiding places, it is impossible to dislodge the rats from their retreat.



IMPROVED CORN HOUSE

The corn house shown in end view is made so that it is inaccessible to rats or mice, and there are no hiding places beneath it. It is elevated three feet above the ground, on firmly set posts. The cribs are six to eight feet wide and of any desired length. The outside is closely boarded and battened. The floor of the crib is made of four-inch strips set an inch apart, to admit a current of air.

The space between the cribs is twelve feet wide, and is closed inside from the bottom of the cribs to the ground, forming an inside shed, which is not accessible to any farm animals or vermin. This inner shed is closed by sliding doors at each end. The cribs are boarded up inside the shed with four-inch strips placed three fourths of an inch apart, to admit air. This makes a vermin and weather proof crib with plenty of air for the corn.

The space above the shed can be floored over and used to dry onions and for various other things. The shed between the cribs makes an excellent storehouse for implements. As many doors can be made in the crib as desired. The roof should be covered with some good, prepared roofing.

J. E. BRIDGMAN.

FROM THE CITY BACK TO THE SOIL

The financial flurry has caused hundreds to desire to leave the cities and seek homes in the country. I have letters from small merchants, artisans and working men who have saved up sums ranging from three hundred to five thousand dollars, and wish to forsake the city for good and buy small farms, or tracts, on which they can grow sufficient produce to yield them a fair living. Most of these people wish to learn where they can find localities where soil, climate and markets are favorable for gardening, or farming on a small scale.

Advising this class of people is a difficult matter. About all one can tell them is what he would do if he had decided on making the same sort of a move, and what some others have done who made this move some years ago. If this matter came up to me I would seek a location near some town of about two to five thousand inhabitants. As a general thing towns of this size are not so well supplied with a real good quality of vegetables, fruits and poultry products as the large cities. There usually is a good market for high-class products of garden and poultry yard, and one must make up his mind that he must produce only high-quality products if he expects to get a place in a market already occupied.

I have inspected the garden produce in the great markets of several of the larger cities, like Chicago, St. Louis, Minneapolis, and others, and found great quantities of the finest grown anywhere. The markets were great, and the supply also was great. Then I have examined the garden produce on the markets in many small towns of two to six thousand inhabitants, and actually found much of it of a quality that could not be sold in the markets of the great cities. Occasionally I have found garden and poultry products on sale in stores and from wagons in these smaller towns that was of excellent quality, and almost invariably I found that this fine produce came from the garden or poultry yards of some young, live man who had adopted the best methods of fertilization and culture, and whose aim was to produce only the best. I have also found a few middle-aged people producing a fine quality of produce, though in only limited quantities. And though I found much inferior stuff going to waste because it could not be sold, I never found any of the best quality.

One would have to live pretty close to the cushion the first year or two, until he could get his land in the right condition for producing high-class vegetables. He could not expect to do much of anything with his poultry, other than to stock up, the first year, and unless he understands the management of poultry pretty well he would have a whole lot to learn.

Most of these inquirers seem inclined to want to go in debt—want to buy more than they can pay for cash down. I would advise any one not to do that, more especially one of this class. If you can pay for only one acre, don't buy more. If you can buy ten, then buy that number; but don't go in debt unless you can see your way safely out. I have known men to begin with half an acre and work up to five. Rarely have I known one to go above that, because they have learned the possibilities of one acre, and know that if they buy more than five they must change from gardening to farming, and such a change is not always a profitable one.

The best asset one of these gardeners, fruit growers and poultrymen can have is a reputation for producing and marketing first-class products. If the buyer knows that the entire contents of a package are always equal to the part in view he does not haggle at the price, and he gives his order with the certain knowledge that all he gets will be equal to the sample. If a man orders a fowl or two or three young chickens for a Sunday dinner or for the entertainment of a party of friends, he does not kick about the price if he knows that he is sure to get birds that are first quality. And I want to say just here that there is as much difference between the palatability of a fowl that has been raised in a clean yard and fed sound, wholesome food, then properly fatted for market, and the average fowl from the dealer as there is between a ripe peach and a crab apple.

I know a little woman who lives on a two-acre lot in the suburbs of a town of about a thousand inhabitants who raises chickens and sells them already dressed for broiling, roasting, frying or for real potpie for more than double the price such birds bring when sold in the open market. She has worked up this trade, and annually raises five to six hundred, and cannot half supply the demand. Every one of her patrons declares she raises the finest-flavored chickens they ever ate, and a guest of one of her patrons declared that they were fully the equal of young pheasants from the Northern woods. Her stock is simply kept in clean quarters, supplied with clean, sound food without any drugs in it, pure water, and is nicely fatted before being marketed. There is plenty of poultry on the market, but the meaty, juicy, tender kind is exceedingly scarce.

This woman was making a scant living for herself and two children by taking in washing. Illness compelled her to give up washing, and she leased this little place in the suburbs and began growing vegetables and raising poultry. Her success has been such that she has bought the place, and will soon have it paid for. No matter what the market for common stuff is, there always is a good demand for that of high quality, and people are willing to pay good prices for it. She says she does not work hard—that is, do much heavy work—because she is not strong; but she says she is always going, constantly doing something in the garden or among the poultry, and keeping things moving. That's how she gets so much done and is making money. If a weakly woman can do so well, a man who is willing to stick steadily to working and learning should be able to succeed.

I know men who have left the city and taken up gardening, small-fruit and poultry raising, and after two or three years of apprenticeship have worked into a neat little income. I have known others to make a miserable failure of it. The reason was plain to me. The successful ones went in with a determination to dig out success. Those who failed were interested in many things other than the business they were engaged in; talked more than they worked, were not thorough in anything, and simply invited disaster. I have known men to leave the city and take up farming on a limited scale and succeed splendidly by simply applying to their new tasks the principles that assure success. And some of these men have made better farmers than their neighbors who were raised on the farm and followed that vocation all their lives.

These new men were not content to follow old beaten paths and stick to practises that were moss grown, unless there was a good and sufficient reason for doing so. They studied constantly to learn better, safer and easier methods. They were constantly asking "Why?" They read books, pamphlets and bulletins recommended by heads of the experiment station in their state. They sought the best information high and low. They noted the work and methods of men who were successful specialists. All the knowledge thus gained was carefully sifted and then proved. In short, these men put their whole minds on the work in hand, and did it in the best manner possible. As one of them said to me, "I provided my land with what was necessary to make it fertile and friable, then I wrested that fertility from it in maximum crops. But I did not fail to return to it as much as I had taken out." One season, when the corn crop of his neighbors was almost a complete failure from drought, he grew a fairly good crop. He had a dust mulch six inches in depth over his entire field, and below that the soil was quite moist. He said he farmed according to the season, not according to rule.

These men who desire to leave the city and go back to the soil must make up their minds to get right down to plain, practical work. They will have lots to learn. They must be thorough. They need not work hard if they work right. Farming and gardening is intensely practical, and to be successful one must be constantly at it—constantly doing and constantly learning. They must buy carefully, and try to have something to sell every week in the year.

FRED GRUNDY.

RICE CULTURE IN ARKANSAS

On what is known as the Grand Prairie in the state of Arkansas, covering portions of the counties of Lonoke, Prairie and Arkansas, farmers have made a notable success in less than six years with rice culture. The three counties here mentioned are in the eastern part of the state, between the Arkansas and the White rivers, and not far distant from the Mississippi River.

Rice culture has heretofore been carried on in this country in low, swampy districts, near to the seaboard, where flooding from lakes and bayous is practicable. In this field, well water is used for flooding, and the land, while low lying, is not swampy and does not differ greatly from the ordinary farming land of that state.

HARVESTING THE RICE CROP ON GRAND PRAIRIE, ARKANSAS

On this continent areas which will produce rice are very limited, so far as is now known. With the exception of this new field, the industry is practically confined to narrow strips of coast land in Louisiana and Texas, where it has been carried on since the first settlements. The plant is very susceptible to frost, and its growth must always be below the frost line. The soil, in addition to containing certain chemical properties little understood, must have a subsoil impervious to water, in order that artificial swamps may be maintained during the growing season. The discovery that the Grand Prairie district in Arkansas would produce rice was made several years ago by negroes. It was their custom to plant small patches along the bayous for their own consumption. This they kept up for several years before any one thought of the commercial possibilities of the crop in that region.

In 1902 a small field of rice was planted and flooded from a well as an experiment. The experiment was not entirely successful, but it was followed by others, and the demonstration was soon made that rice was a practicable and profitable crop. Some of the early fields yielded as high as ninety bushels to the acre, which created a sensation similar to the finding of gold or other valuable minerals. With the market price of rice above one dollar a bushel, land worth from twelve to twenty dollars an acre and water to be had for the drilling, rice culture became an attractive industry to the farmers accustomed to the much smaller profits of ordinary crops.

A FIELD OF GROWING RICE ON GRAND PRAIRIE IN THE STATE OF ARKANSAS

The method of cultivation in the Arkansas district is similar to that of irrigation from wells. The land is naturally level and the soil lies in a bed of hard pan, which is practically impervious to water. The grower digs trenches around and through his field, and throws up dikes where needed, to carry, distribute and hold the water, which is pumped from wells seventy or eighty feet in depth. During the growing season of about seventy days the field is kept flooded to a depth of several inches, and in order to overcome the effects of evaporation and seepage it is necessary to keep the pumps going each day. When the grain is nearly ripened the water is drawn off and the field allowed to dry for the harvest.

Rice in this country has no insect enemies. In the coast fields great damage is wrought by hordes of birds and by the heavy wind storms. In the Arkansas field the only damage is from storm, which is not great. Under intelligent culture the crop there is as nearly sure as any crop can well be.

The United States and Arkansas Departments of Agriculture have taken part in the experiments and developed much valuable information in the matter of culture. A recent bulletin says:

"There is no crop comparing in beauty to a field of green rice, thicker than wheat, nearly as tall as a man, growing without tillage or cultivation after planting. It has more nourishment than any other cereal (wheat, not excepted), and yields as high as one hundred bushels to the acre of grain, which serves as a staple food of mankind in all climes—in infancy, maturity and old age. It furnishes the principal article of food for one half of the population of the earth."

The method of harvesting rice is much the same as that of other grain, and is now done by machinery in a large way. The grain is cut and bound with self-binders and shocked and stacked. It is thrashed like wheat, placed in large sacks and sent to the mill, where it goes through a cleaning and polishing process, after which it is ready for consumption. The shrinkage in cleaning is quite heavy. A sack of one hundred and eighty pounds of "paddy," as rough rice is called, will yield only one hundred pounds of merchantable rice. However, as the price at grocery stores is seldom less than ten cents a pound, there is plenty of margin for shrinkage and waste.

The by-products in rice culture are worth considering. A good field will yield about six tons of straw to the acre, which has a feeding value almost equal to hay. Baled, this straw is worth as high as seven dollars a ton in the markets. The refuse obtained in cleaning is called "rice polish," and brings about twenty dollars a ton for feeding purposes. This latter product, however, is a perquisite of the mill and does not concern the grower to any extent.

From the single experimental field five years ago, the Grand Prairie field has spread until it now covers more than two thousand acres, and the area is doubling each year. The extent of the rice-producing soil has not yet been determined. Certain tracts and within certain limits are known as "proven ground," while other and more extensive tracts are considered highly favorable. In many cases the raw prairie is broken up and sown to rice. Water is usually pumped by steam engines, wood for fuel being plentiful.

Owing to the heavy yield and the valuable by-products, the profits to the grower are large, and the price of "proven" rice land in the Grand Prairie district is rapidly advancing. The cereal has wonderful stooling abilities, a single seed producing from ten to one hundred straws, each bearing a head yielding from one hundred to four hundred grains. The average yield of the Arkansas field is placed at seventy-four bushels of "paddy" to the acre, and the selling price ranges close to one dollar.

Rice is a cereal the culture of which is little understood, and it is possible that it might be grown in various parts of the South and Southwest. It would be well worth while for farmers having land which seems to answer the requirements to procure a quantity of seed from some rice-growing section and experiment with it. Wealth entirely unthought of might be so developed. Edmund G. Kinyon.

◈

LET'S NOT THINK ABOUT IT

The little chap of the farm had gone wrong. Somehow or other the shadows had dropped over his usually sunny sky and he had done a thing that grieved the mother.

"What made you do it, Laddie? I didn't think my little man ever would do a thing like that! It will make me feel so bad every time I think of it!"

Through the tears a pair of honest eyes looked up into those of mother.

"Then don't let's think about it, mama!"

The easiest way and the best way to rise above the trouble was not to think about it—just to forget it! Dear little philosopher! Had he not found the lucky stone of all happiness? When hard things come and the way presses, don't stop to think about it. Forget it. Go ahead. The clouds will be all gone in the morning. It will be sunshine and all will be well.

The farm is not all joy and gladness. No matter who may say so, there is something besides a full pocket, plenty to eat and nothing to do but lie under the trees and have a good time. You and I who live on the farm are as optimistic as any one in all the world. Why should we not be? And yet we know that things will sometimes get terribly awry. The cows will get out. It will rain when we would like the sun to shine. We do not always feel well. Then just a spark will make the fire fly in a way that we are so sorry for after it is all over. What then?

Let's not think about it!

What is the use of getting all wrought up over the little things that come to us from day to day? They will soon pass by and all will go on as before. We do not any of us mean to say wrong things to each other. We feel badly every time we have gotten out of patience and scolded the cows or the horses or some dear friend in the presence of the little folks, who have ears that hear farther and more acutely than any other ears in all this world. Not for the world would we have tired ourselves out storming about something that we knew all the time did not amount to anything.

When we sight the storm coming in the distance, we should just stop and say to ourselves, "Let's not think of it! If we must meet the thing, let's do it like men and women, and never be swept off our feet and carried beyond our depth of patience and long suffering by what is at best a trifle."

Let me tell you the way a dear sister gets around troubles in the house and elsewhere. If a dish gets broken, she just says, "I am sorry; but it is only a thing! Things can be made good again. I will not worry about things!" So the sunshine comes again. Is it worth while to grow sad or gloomy over mere things? Life is so short! Hearts are so precious! We need to take longer looks—looks that reach beyond the clouds and the big drops of rain, and see first the rainbow and then beyond that the bright sky of the morrow.

Would it not be a good plan for us all to remember our little man's "Let's not think of it, mama?" E. L. Vincent.

◈

STABLE MANURE FOR CORN

Stable manure seems especially well adapted to the corn crop, since the corn needs a manure that will furnish a constant and regular supply of plant food during a long growing season. The stable manure not only does this, but it helps the soil to hold moisture, and also has a warming influence on the soil.

Some farmers recommend applying the stable manure to the meadows only, but it is not a bad practise to apply it to the land intended for corn. There is more labor bestowed on the corn than on any of the other cereal crops, hence the importance of growing a heavy crop, in order to get pay for labor bestowed, and also to get a profit from the crop.

Commercial fertilizers do not usually show as marked an influence on the corn crop as they do on some of the other crops, and as the corn must have a large amount of plant food, just such as the stable manure will furnish, it is best to use the stable manure on the corn. If it should become necessary to use some commercial fertilizer, it will be found more advantageous to apply it to the wheat and oats crops. A. J. Legg.

◈

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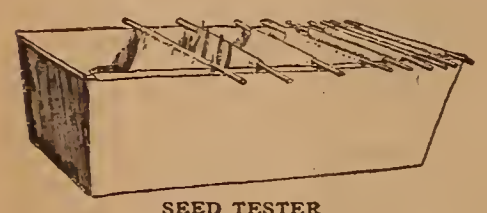
Review of the Farm Press

PRACTICAL SEED TESTERS

For the ordinary planter the "dinner plate" tester made with two dinner plates, and one or more moist strips of sterilized cotton goods, preferably cotton flannel, will be found to answer all purposes. The cotton strips are sterilized in boiling water, to destroy spores of molds and other fungi present, folded twice upon themselves, and placed in one of the plates; the seeds are now laid between the folds of cloth so as not to touch each other, and the second plate is inverted over the first, thus forming a moist, aerated and more or less sterile chamber. The cotton strips must be kept well moistened, but not saturated, preferably with water that has been sterilized by boiling, and allowed to cool before using. Two or three lots of seeds may be tested in the germinator at one time, but each should be contained in a separate cotton strip, and numbered to avoid error.

When, however, it is desirable to make several germination tests at one time, or when many varieties are to be tested, instead of duplicating the plate germinators already described, the writer found the



SEED TESTER

following germinator, suggested by Dr. Volney Spaulding, formerly of the University of Michigan, to be superior: A deep granite bread pan six or eight inches wide was obtained, in which was kept about one fourth of an inch of water; cotton-flannel strips of any convenient length, two or three yards, and of the width of the pan, were tucked crosswise at intervals of five inches; short galvanized wires about an inch longer than the width of the pan were inserted through these tucks and gathered together, thus forming the cotton strips into numerous folds or loops, which were suspended in the pan above the water by means of the supporting wires. The ends of the strips being left sufficiently long to touch the water in the pan, the entire piece of cloth composing the loops, in which the seeds are placed, is kept uniformly moist. The cloth should be moistened before beginning the experiment, and, it is needless to add, sterilized.

A definite number of seeds taken as they come from an average sample are counted out for each germination test. For seeds in rather small lots, as garden seeds, fifty to one hundred will answer, while for the cereals, grasses, clover and others used in extensive cultural operations, about two hundred should be used, and the tests duplicated when any doubt exists about the results. The tests should be examined from day to day, and the sprouted ones removed and counted, the number being recorded.—University of Arizona Station Bulletin No. 54.

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PRESERVATIVE TREATMENT OF FENCE POSTS

Satisfactory fence posts are each year more difficult to secure. Substitutes, such as re-enforced concrete and iron, are probably too costly to compete with wooden posts, and the only solution of the difficulty lies in the use of cheaper woods and in preventing decay by preservative treatment.

The more expensive kinds of wood, such as white oak and cedar, which have long been used for posts, are now too scarce and too much in demand for other uses to allow of their meeting the demand for posts. Fortunately, most of the so-called "inferior" woods are well adapted to preservative treatment. This is especially true of the cottonwoods, aspens, willows, sycamores, low-grade pines, and some of the gums. When properly treated these woods will outlast the best grades of untreated timber, and are therefore cheaper and more satisfactory.

CAUSES OF DECAY

To appreciate the value of any preservative treatment it is necessary to know what causes decay, and how a preservative treatment tends to prevent it. Briefly, decay in timber is caused by the action of bacteria and fungi—low forms of plants—which require for their development definite amounts of air, water, heat and food. If one or more of these factors can be eliminated in whole or in part, bacteria and fungi will not develop and the wood will not readily decay.

It is well known that wood decays first where it comes in contact with the ground. This is because the fungi find there the conditions most favorable for their growth. Protection is therefore most needed at this point. When wood is fully exposed to the air, as in the tops of posts, the moisture is rapidly evaporated and decay is very slow. In the case of some woods, however, such as cottonwood and maple, a treatment of the top is necessary.

PRESERVATIVE METHODS IN USE

A number of more or less crude methods have been tried for prolonging the life of fence posts. These have brought out certain points which may prove of value if more efficient treatment cannot be undertaken. Chief of these are the following:

A seasoned post is better than a green post; hence, posts should be as dry as possible before being set.

Setting a post small end down does not check its decay.

By piling stones around the base of the post or setting it in masonry or concrete, vegetation is kept away, better drainage is secured and the post is kept drier. The slight gain thus secured does not, however, justify the cost.

Charring the butt of the post, if properly done, gives good results. Only thoroughly dry posts should be charred, and the charred surface should extend at least six inches above the ground line.

Soaking the posts in a solution of copper sulphate is not recommended, since this salt is too soluble, and will therefore more quickly leach out. Soaking in mercuric chlorid takes so long that it cannot be recommended to farmers or ranchmen. This solution, moreover, is extremely poisonous and must be handled with great care.

Good results are sometimes obtained by boring holes diagonally into the posts just above the ground line and filling them with some preservative solution, such as various forms of coal tar. This method gives the best results with soft woods, like sycamore and cottonwood. Boring the holes, however, weakens the posts.

If the butt of a post is painted with or plunged into a hot solution of carbolineum or creosote, very good results can be obtained. The posts should be thoroughly dry, in order to prevent internal decay and exposure of the inner untreated wood by checking. Next to impregnation with these materials, this method is doubtless the best.

Creosote has been used for preserving wood since 1838. Timbers impregnated with it have had their durability increased tenfold.—Forest Service Circular No. 117.

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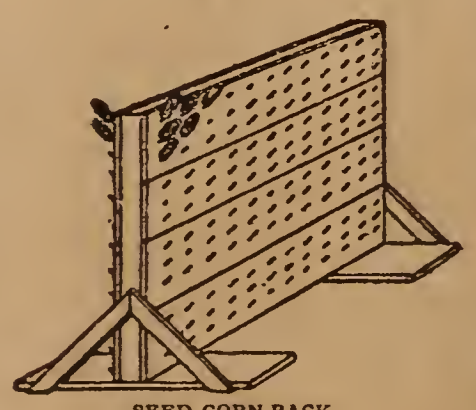
HANDY CORN RACK

When it is desirable to test seed corn and to keep an accurate account of each ear there is no better plan than to stick the cobs on the points of wire nails that have been driven through a partition of inch boards. Each nail is numbered, so



SEED-CORN RACK

that when the corn is tested a corresponding number in the testing box indicates the ear the grains were taken from. Ears of seed corn may be put on the rack in the fall and left without handling until time for testing and planting in the spring. A rack of this kind can be easily made for storing small quantities of seed corn.—Iowa Register and Farmer.

◈

STORING EGGS FOR HATCHING

In general, eggs cannot be set the day they are laid. Place them in a room where the temperature is fairly constant and at about sixty degrees Fahrenheit. Turn them carefully at least once a day. If the air is very dry, sprinkle the floor with water, or place a few pans of water in the room, otherwise there may be a rapid evaporation of moisture from the egg, leaving a big air cell in the large end of it. One can readily determine the amount of evaporation by marking the air cell while holding the egg in a ray of light passing into a darkened room, and then examining it again in the same manner after a couple of days. There should be a very slow increase in the size of the air cell.

Eggs intended for incubation should be kept no longer than is absolutely necessary. Two weeks is about as long as it is safe to keep them, although with good care, under proper conditions, they may be kept longer. The fresher the egg, the more likely it is to hatch a good, strong chick. Many farmers practise setting the eggs from one day's laying, which is not objectionable, providing proper care has been exercised in sorting the flock to secure sufficient eggs of uniform size and color.

When the hens all run together and the finest-shaped eggs from the whole flock are chosen, increased egg yields cannot result, as the chances are that some of the hens that have been laying well all the fall and winter are now ready to sit. Those that have not laid for months are the most likely to do so for a few weeks in the spring, and often produce fine, large eggs, due, perhaps, to their long winter's rest. The use of eggs from such hens can only result in deterioration of the flock.—The American Fancier.

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COMBINED ICE HOUSE AND REFRIGERATOR

The illustration of this ice house and refrigerator has been sent in by a Missouri subscriber. He calls attention to the fact that every year the use of ice

ICE HOUSE AND REFRIGERATOR

increases. It is no longer a luxury, but has become a necessity so soon as its value is known by experience. However, its very abundance causes it to be disregarded, and this mine of usefulness is found every year perhaps almost at the farm door and allowed to pass away in the spring unworked. The ice-house refrigerator here shown can be built by most any farmer, and at a small cost, and in many cases would save its cost the first season. The illustration shows a section of a building with a room partitioned off in such a manner that it has ice on three sides and the top. Its floor is below the surface a few feet, in order to take advantage of the coolness of the earth. The house has double walls and the door is protected by a porch. The floor and ceiling slope to secure the necessary drainage.—The Homestead.

◈

MODERATE HOURS

Under present rural conditions it is difficult to carry on a farm successfully with less than ten hours' work each day; but ten hours' work is enough, and the farmer who insists upon working his help more than that is contributing to the scarcity of farm help and its degradation. When a person at night is too tired to read or to think, and drops immediately into senseless slumber, he is unfit on election day to perform the duties of a good citizen, or on other days to perform the duties of a good householder.

The farm laborer is justly entitled each day to a few hours for recreation and attention to his domestic affairs. It may be said that he would not spend this time profitably if he had a chance to do so, but he has the right to the opportunity, and history shows that he has generally improved the opportunity when given the chance.

When the Agricultural Laborer's Union of England, under the leadership of Joseph Arch, secured shorter days' work for themselves, they soon became more intelligent and better householders. Their gardens were better cultivated, their tenements were better furnished. Flowers began to blossom around their cottage walks, the windows were neatly curtained, books and papers appeared on their tables, and everything inside and outside their dwellings indicated a marked improvement in their social condition.—Burton H. Potter in the American Cultivator.

UDDER IMPORTANT

The first and all-important point in selecting a cow is to note the size of the udder—whether it is large, uniformly placed, with teats placed at the proper distance; to note whether the udder is flabby and not fleshy, which is particularly apparent immediately after milking. According to the laws of correlation, a cow that is a large milker must necessarily develop a large udder, and if free from fleshiness the size of the udder is one of the truest indications of efficiency in an animal.—O. Erf in Kimball's Dairy Farmer.

◈

CORN-AND-COB MEAL

Feeders have been generally disposed to consider a ton of corn-and-cob meal as about equal in feeding value to a ton of corn meal without the cob. Professor Henry in his book on "Feeds and Feeding" quotes from experiments conducted by Professor Shelton at the Kansas Agricultural College in which steers were fed on corn meal as against corn-and-cob meal. The experiments were conducted two different years, and the results indicated that a ton of corn-and-cob meal was equal in feeding value to a ton of corn meal. In fact, the steers fed corn-and-cob meal made somewhat better gains a day per head.

Professor Mumford, on the other hand, gives it as his opinion, arrived at after considerable experimentation, that the cob part is of very little value. In other words, he thinks there is no advantage in grinding up the cob with the corn. Professor Mumford contends that with corn at thirty-five to fifty cents a bushel and hay at present prices there is very little profit in grinding corn for two-year-old steers. He publishes a table in his book on "Beef Production," in which, with corn at thirty-five cents a bushel, he figures the net profit a steer fed broken ear corn, to be $12.07; corn meal, $8.45; corn-and-cob meal, $6.61; shock or fodder corn, $11.46, and shelled corn, $7.95.

The net cost of a pound of gain on the steers which he used in this experiment was 6.75 cents with broken ear corn, 7.5 cents with corn meal, 7.8 cents with corn-and-cob meal, 6.5 cents with shock or fodder corn, and 7.5 cents with shelled corn.

If one is so situated that he can grind corn or corn and cob without much extra cost, and if he is short of hogs to follow the cattle, then we would say that under present conditions it would pay him to grind. If, however, it costs him very much to grind, and if he has hogs to follow, we doubt very much whether it will pay to grind. It is understood that there is very little nutriment in the cob, but it has been considered valuable as a divisor, loosening up the corn meal in the stomach and making it more digestible.—Wallaces' Farmer.

◈

ALFALFA THE MOST PROFITABLE CROP

Accurate record is kept on the university farm of the cost of producing every crop grown; of the yield an acre and the value of the crop an acre when harvested. For several years the alfalfa crop has proven to be the most profitable crop grown, and has shown an average profit of thirty-five to forty dollars an acre each year.

The records of last year's crops were as follows:

Crop Grown	No. of Acres Grown	Cost of Production an Acre	Yield an Acre	Value an Acre	Profit an Acre
Alfalfa (3 crops)...	18	$8.69	4.73 tons	$47.26	$38.57
Timothy (2 crops)...	15	7.39	3.56 tons	39.99	32.60
Wheat	24	10.09	33.92 bus.	28.42	18.33
Corn	41	15.26	62.75 bus.	32.24	16.97

In figuring the cost of producing the crops, labor was figured at thirty-five cents an hour for man and team and fifteen cents an hour for hand labor. In figuring values, alfalfa was figured at ten dollars a ton, timothy hay at twelve dollars a ton for the first crop and ten dollars a ton for the second crop, wheat at seventy-five cents a bushel, corn forty-five cents a bushel, and straw and corn fodder at two dollars a ton.

The success that the Agricultural College has had with alfalfa has influenced a great many farmers, who have been at the college as students, to sow it, and the results on the whole have been very satisfactory. The ability to grow alfalfa successfully on a farm will invariably add several dollars an acre to the value of the farm.—Ohio State University News-Bulletin.

A Straight Talk With Farmers On the Question of Fertilizing

Plants Like Horses Must Have the Proper Food

Farm teams could not do good work on an hour's grazing at noontime. They merely need oats, cured hay, corn—something that makes muscle and energy.

The oats, corn, hay, on which they are fed, must also have the right kind of food—cannot grow in large stalk, in full and solid grain, with rich nourishing qualities, from the little plant food that is left in an old worn soil.

Soil Loses Its Best Plant Food First

If the grocer allows customers to select fruits and vegetables from his open boxes, the first comers will take the finest. Nature compels plants to select the best food there is in the soil. *They are all greedy for*

Nitrate of Soda

for they thrive best on that; and when there is little of it left they dwindle, simply because they are starving. There is only one thing to do when the nitrate is exhausted: the soil must be supplied with more.

There Are Three Ways of Supplying the Soil With Nitrate

I. *You can do it by putting in raw nitrogen.* You have the raw nitrogen in such common fertilizers as weeds, leaves, grasses, tankage, offal, dried blood or fish, or any kind of organic matter.

There are disadvantages in this plan, however, which it is well to clearly understand. In the first place, plants cannot eat raw nitrogen any more than horses can eat cord wood. The plants must wait until Nature puts her forces to work and changes the raw nitrogen into nitrate of soda. This work is done by a certain kind of bacteria. These bacteria propagate in sufficient numbers only when the weather is favorable. With *continuous* warmth and frequent *light* rains, i. e., with *perfect* weather, a part of the work will be done in a month or two; but a great deal of the raw nitrogen will not be converted into nitrate for a much longer time. Low grade fertilizers require a year or two.

You see that the plants will have but a small portion of the nitrate from raw nitrogen at the particular time when they need it. This fact will be referred to again. It is a *vital* fact.

It is also a fact that much of the nitrogen is lost in gases during this process of conversion into nitrate. That is clear loss.

Still another fact of special importance is that in the change, from raw nitrogen to nitrate there is often an *acid by-product* thrown out which *sours the soil* and seriously injures the quality of the crop.

When these losses and hindrances are summed up, you will find that all organic fertilizers are needlessly expensive; and do not give you the crops you pay for putting in.

Nitrate of Soda instead of souring a sweet soil will sweeten a sour soil. When all its nitrogen is used up the residue of soda is wholesome, as you well know.

II. *Nitrate of soda can also be supplied to the soil in "combination."* Now let us candidly examine this plan and see whether it is any better than the raw nitrogen plan. This plan is to use what are called "Complete Fertilizers," which contain a certain per cent of soda.

Now, if the per cent were really *certain*—if it were not uncertain, both in amount and in quality—there would remain but one objection. That objection is very practical. The "complete fertilizer" costs a great deal too much.

Figures That Are Interesting

At the New Jersey Experiment Station 195 "complete fertilizers" were analyzed, and their prices tabulated, with the following results. The average price was $34.23 per ton. They contained, on the average, about 16⅔ per cent of actual plant food. To get a ton of real plant food you must buy six tons of the "complete fertilizer," at an expense of $205.38—for about 20 acres.

Nitrate of soda, every ounce of which is the best possible plant-food, will cover your 20 acres with a bigger and finer crop for much less than HALF the money.

III. *The right way to replenish a worn soil with nitrate of soda is to put in nitrate of soda*—the pure stuff, as it comes direct, under Government inspection from the nitrate mines of Chili, where Nature completed her great chemical work ages ago.

Nitrate of Soda Gives Plants the Essential "Good Start In Life"

You know that pigs and calves and colts must have a good start. If they are not well nourished during the first few weeks they become stunted, and never can make a full and fine growth. You know that is especially true of grains—a backward, dwindling start never can be made up.

Plants require their richest nourishing when their fine spraying rootlets are new and tender. If they do not get it then the rootlets quickly harden to a small size, and will not expand or extend sufficiently for the plants to get full nourishment later on. The loss cannot be made up.

Nitrate of soda, all of it, as soon as you put it in the ground, is ready to be taken up by the tender rootlets, and assimilated into the fibre and fruit of the plant.

With nitrate plants do not have to wait until Nature's little cooks, the bacteria, get a late dinner ready—with the cooks often on a strike because the weather is bad. Ages and ages ago the work was all done—the wasted gases all thrown off—and here is their pure and perfect food.

These three plans—the use of Raw Nitrogen, the use of Complete Fertilizers, the use of *The Pure Product* in *Nature made Nitrate of Soda*—only need this plain statement of facts to show you which is the proper method.

MORE THAN TWICE THREE OR FOUR TIMES

THE CROP—THE PROFIT

That is the story your Timothy will tell when you cut it, if you fertilize with

Nitrate of Soda

We have arranged to send, **free**, to a number of Timothy growers, enough Nitrate of Soda to make a thorough test on a good-sized plot—first come, first served, as long as our trial supply lasts.

To each one of the twenty-five farmers who get the best results, we will present a copy of Professor Voorhees' great book, "Fertilizers"—a money-making volume of 327 fact-full pages for every progressive farmer (also "Grass Growing for Profit," another valuable book) if paper is mentioned in which this advertisement was seen.

We shall ask you to use the fertilizer on a plot of ground, the exact dimensions of which we will give you. We shall ask that you select that part of a field, of wheat or oats or timothy or truck, which has given an average crop. At the harvest you are to measure and weigh the yield of the experiment plot and the yield of a plot of exactly the same size right by the side of it, which has no fertilizer of any kind; and give us, very accurately, the yield of the two plots.

Send name and complete address on post card.

WILLIAM S. MYERS, Director
John Street and 71 Nassau, New York

Nitrate of Soda May Be Used Alone or With Manures

On naturally good soils, nitrate of soda alone is frequently sufficient. If the soil is badly worn, use 100 pounds to the acre. If but partly deteriorated 75 pounds will give splendid results.

Results in Cash of Nitrate of Soda Alone

A large number of experiments on Timothy have been made by farmers all over the country and reported to Professor Myers, at 71 Nassau Street, New York. Those experiments show that the use of 100 pounds of nitrate of soda to the acre produced an

Average Increase

of 2,775 pounds of field-cured hay over the plot where nitrate was not used.

The nitrate of soda cost at the time the experiments were made $2.75. You know what you can get for 2,775 pounds of the finest, cleanest, richest, field-cured Timothy. You make from 150% to 200% on your investment in three or four months.

Potatoes, Beets, Cabbages, Carrots, Oats

Similar experiments—by scores of farmers throughout the country, using 100 pounds of nitrate of soda (alone) to the acre—show *average increase* per acre of

Potatoes	3,600 lbs.
Beets	4,900 "
Cabbages	6,100 "
Carrots	7,800 "
Oats	400 "

Figure it up yourself and see what an enormous profit you have on the small outlay necessary for 100 pounds of nitrate of soda per acre.

Nitrate of Soda is a Magic for All Early Crops

Peas, beets, lettuce, onions, radishes, beans, sweet corn, all truck gardening that you want early, with a rapid and luscious growth, will get the proper nourishment from nitrate of soda, which is a perfect plant food ready for them on the instant.

The Only Plant Food That Can Be Used Week By Week

Blackberries, gooseberries, raspberries, currants, as every gardener knows, should not make a rush growth, but a steady and even growth, which means that they must be fed little and often.

A sprinkling of nitrate of soda every week or ten days will show surprisingly fine results.

Nitrate of soda is the only fertilizer that will feed them instantly whenever they require special nourishing.

For Planting in Succession and Ripening of Garden Truck

Nitrate of soda is the perfect fertilizer. It is always ready for assimilation. With a trifling outlay for 100 pounds to the acre you have fresh, rich "early vegetables" in September—just as luscious as in June.

The Need of Common Business Care in Farming

If railroad men and manufacturers neglected their rolling stock and machinery as many farmers neglect their soils, they would go bankrupt in a year. With ordinary care in keeping up the soil, farming becomes a splendid business—the profits doubling and trebling.

Free Literature on Nitrate of Soda

To a limited number of farmers who will make experiments under our directions, we will send the bulletins containing results of Agricultural Station work, which give actual data of trial fertilizing with nitrate of soda. We will also send our handsomely illustrated book of 230 pages on "*Food for Plants.*" It is brimful of such useful and money-making facts as every farmer ought to be familiar with.

We want your word that you will meet our proposition candidly, and conduct an experiment with nitrate of soda carefully and give us the exact results.

The offer, of course, is limited.

Try it for yourself, and learn how much money there is in just a little science properly applied to farming.

If you do not care to make the experiment, or if too many have applied ahead of you, and you still want a lot of general information on this matter of raising big crops, The Nitrate Propaganda, 71 Nassau Street, New York, will give this valuable free information.

TUSSOCK MOTH

THE Tussock moth has been troublesome in many sections during the past year, especially on elms, which they deplete. While in the larva state, it feeds on a great variety of trees as well as on the elm.

The caterpillars are rather pretty, with bright red heads, and they bear a series of dense brushes of hair along the middle of the back. They are over an inch in length when fully grown, and then go down the trees and undergo their changes in rubbish piles or along fence rows, where they spin their dirty whitish cocoons of mixed hair and silk. In due time the adults emerge. The males have fully developed wings, while the females have no trace of them whatever.

The insect is not often seen during the daytime, and usually rests concealed until nightfall. The female can be distinguished in the pupa stage by its larger size and the absence of wing pads. When it crawls out on an open surface it is a grub-like creature with a very large body. Neither of the sexes are capable of feeding. The eggs are deposited in a frothy mass upon the cocoon from which the female emerged. This frothy mass soon dries and becomes brittle and serves as a protection. The first brood of moths appears about midsummer, and from the eggs then laid the little caterpillars hatch and become adults in the fall, and it is from the eggs then laid that the insect emerges in the spring.

As to the best remedies for this insect, first remove and destroy the egg masses in winter. If the egg masses are destroyed in winter the tree will remain clean during the summer, provided the caterpillars are prevented from crawling up the trunk in the spring. For this purpose it is customary to band the trees. Sometimes a band of cotton batting is used. Others use a band of heavy wrapping paper covered with dendrolene or other sticky material. The female being absolutely incapable of flight must crawl up the trunk of the tree, and is absolutely unable to pass these bands. This sort of protection must be watched, however, otherwise it will become hardened or covered with dirt, or a large number of caterpillars may gradually make a bridge over it and cause it to fail of its purpose.

Troughs of oil about the trees are also used for this purpose. This sort of protection is also used against the canker worms, in which the female is also wingless. The canker worm moth crawls up the tree in early spring.

The best remedy to use in summer for this moth is to spray the foliage with Paris green and water, and it is quite satisfactory.

◈

GRAPE CUTTINGS

S. W., Peonia, Colorado—Cuttings of grape vines are generally made in the autumn. They consist of the well-ripened firm new wood. They may be one, two or more buds long, but it is seldom that they are made over twelve inches long. As soon as made up they should be tied in bundles of about one hundred each in the case of the long cuttings, to which this ordinarily refers, as I take it you would not care to bother with one-eve cuttings, which require very different care from the others, and preferably the use of a green house or hotbed.

These bundles are set in the ground with the top end up and allowed to remain in this way until spring, but the whole bundle should be covered at least six inches deep with soil, which should be well packed in around them. On the approach of winter the whole should be covered with at least six inches of a good mulch of straw, stable litter or similar material.

In the spring the bundles should be turned bottom end up and left with about four inches of soil over the butt end. A greenhouse sash should then be put over them on a suitable box, and the heat from this sash will be sufficient to warm up the butts and cause them to callus. They should remain in this position until they begin to show signs of growth at the butt end. This will appear first in the shape of a little ridge, known as the callus, and it is from this ridge that the roots mostly develop. As soon as this little callus is well formed the cuttings should be planted out in good, light, warm soil about eight inches apart, and the rows two to three feet apart, depending upon the method of cultivation. The cuttings should be planted with all but the one upper bud under the surface of the ground.

Such cuttings generally make a good growth the first year. It is very important, however, in handling them, that the soil about the base of the cutting be packed very hard, otherwise the cuttings will dry out and fail. They should receive careful cultivation throughout the summer.

For general use, however, in a small way I think you will find much the best plan will be for you to grow your grapes from layers, as these do not require any such amount of care as cuttings, and are much better adapted for successful propagation for the amateur. In this case all that is necessary is to place some of the wood of the grape in a trench six inches deep and allow it to remain there one season. This is preferably done early in the spring, using new growth of the preceding year for this purpose. You will find it quite easy to bend the cane to the ground and cover it. Do not cover less than six inches, and pack the soil very firm over the same. If this work is done before the first of June the cane will be well rooted by autumn and may be taken up, cut off from the parent vine and set out as a new plant.

◈

Fruit Growing

BY SAMUEL B. GREEN

PLUM TREES NOT BEARING

R. R. S., East Germantown, Indiana—You state that you have a row of plum trees that stand about six feet from each other in the row, are ten years old, and are ten feet from a row of apple trees on each side. It is plain enough that your plum trees are suffering from too much crowding, and I judge from what you say that it would be a good plan to remove at least half of them, taking out every other one, and even then, if the apple trees are vigorous, they will be crowding them too much from the sides.

You cannot expect good crops of fruit on trees that are crowded in this way. Fruit trees that are shaded never produce a full crop.

It is possible that there is some other reason why your plum trees do not fruit, but the conditions you have given are sufficient to account for unfruitfulness.

◈

SELECTING TREES FOR SMALL LOT

A. R. H., Chinchilla, Pennsylvania—I would suggest that you plant, for apple trees, to fit your space, two each of Duchess of Oldenburg, Grimes' Golden, Tolman Sweet and Peck's Pleasant; for pears, one each of Duchess d'Angouleme, Anjou, Keiffer and Bartlett; for plums, one each of Abundance, Burbank, Lombard and Bradshaw; for cherries, one each of Governor Wood and Black Tartarian; for grapes, two of Concord and one each of Moore's Diamond, Catawba, Lindley and Agawam.

In the case of all these fruits I think you would do best to get two-year-old plants, except possibly in the case of the cherries and plums, when large one-year-old trees would be just as well, and possibly better.

One objection to putting apple trees on a small lot is that they take up too much room. For best results in your section apple trees should have at least thirty feet, and pears, plums and cherries at least sixteen feet. I am inclined to think you would get most satisfactory results from using dwarf pears—that is, pears that are grown on quince roots, so they will not become too large. These fruit earlier than standard kinds and are well adapted for the small garden. I know of no near-by nurseryman that I could recommend to you, but think you can find several in your vicinity who can furnish you the stock you need to good advantage. With a reasonable amount of inquiry on your part you should have no trouble in getting what you want, as the varieties I have recommended are standard kinds and none of them high in price.

◈

FRANCE HAS FAR-SIGHTED FOREST POLICY

France has under way a far-sighted forest policy which will require two centuries before the work reaches its greatest efficiency. The plan covers the reforestation of vast tracts of denuded land, and the work is in the hands of four thousand trained foresters in the pay of the republic, and a large number of men employed by the communal governments.

Consul-General R. P. Skinner tells how this work is being done by a great nation keenly alive to the necessity of doing it, and determined that it shall be done well, though years and centuries are consumed in the doing. Colbert, in the reign of Louis XIV., exclaimed: "France will perish for lack of wood," and his prophecy was coming true a century and a half later, when the French people waked to the peril which threatened them, and called a halt.

Their forests were vanishing as are those in the United States to-day, but the depletion had gone even farther than it has yet gone in America. France commenced protecting and restoring its wooded areas nearly a century ago, and has stuck to the task ever since, but so much yet remains to do that Mr. Skinner says in his report:

"The work is slow. It will require probably two hundred years to bring it up to its maximum effectiveness. But the time is foreseen when existing damaged forests will be reconstituted, and when all the waste spaces will be replanted to the point of proper proportion to ensure the conservation of the water supply and to furnish the timber and wood required by the population. The effect upon private landowners of this public work has been most salutary. Where absolutely bald mountains have been replanted, very surprising local results are now visible to all observers. This is especially true in the Hautes Alpes, which had the unenviable reputation of being the poorest department in France, and is, in fact, one of the few from which the United States has received several thousand French immigrants. There are now many artificially planted forests in this department of twenty-five years' standing, and in the bottom land below, conditions have so improved that a state of general prosperity prevails."

The plan of the French foresters is comprehensive. It embraces the care of forest land, planting of trees, fixation of dunes near the coasts to prevent the drifting of sand upon agricultural land, correction of mountain streams, regulation of pasture land, utilization of water in pastoral and forest regions, and the surveillance of river fishing and fish culture. This comprehensive service extends to every part of the republic.

The area of the national forests of the United States exceeds twentyfold the national and communal forests of France, but the problems are the same. France has been longer at the work, and when it began its forests were in a worse condition than ours are now, but not worse than our privately owned forests will be if present methods continue.

Consul-General Skinner concludes his report with this suggestion to those in America who have shown sufficient interest in the matter to write him on the subject:

"If correspondents could penetrate, as the writer has done, the almost inaccessible mountain villages of this country, and there discover the enthusiastic French forester at work, applying scientific methods which cannot come to complete fruition before two or three hundred years, they would retire full of admiration and surprise and carry the lesson back to the United States."—Forest Service, United States Department of Agriculture.

◈

STARTING A STRAWBERRY BED

V. L. G., Nevada, Ohio—If you have had no experience with strawberries, and desire to try them for home use, I would suggest that you visit some one who has a strawberry bed, and who will take pleasure in explaining these matters to you. If you cannot do this, then get some elementary treatise on the subject of strawberry raising. Try "Amateur Fruit Growing," published by Webb Publishing Company, St. Paul, Minnesota, at fifty cents.

It is quite out of the question, within the limits of these columns, to give you full directions for the raising of such a crop. The land which you state raised a good crop of potatoes and corn last year should be in good condition for strawberries this year. The manure should be plowed in, and the strawberry plants set out as soon as they can be obtained in thrifty condition in the spring.

◈

TREATING BLACK LOCUST SEED

J. A. L., San Jose, California—The best way of treating the black locust seed, in order to have it germinate promptly, is as follows: Where a small amount of seed is to be used, put in a shallow milk pan, then pour on water that is nearly boiling, and cover the seed with it perhaps two inches deep. Allow it to set until cool, then pour off the water, and pick out the seeds that have swollen. Treat the remaining seed again in the same way until all have swollen. This should be done at planting time. If the seeds are planted at once after being thus treated they will germinate promptly. If not so treated, they will often remain for a year or two in the land and come up very unevenly. The seed should be sown in warm, rich garden soil, covering about one and one half inches deep.

◈

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Gardening

BY T. GREINER

ONION SEED

A Missouri subscriber says that for some years he has raised mostly Prizetaker onions. He claims he can raise one hundred dollars' worth from one-half pound of Prizetaker seed, as they sell readily at one dollar a bushel when ordinary onions go slow at any price. But the trouble is that he cannot get seed that is pure and true to name. For next season he also intends to try Gibraltar onion. He wants me to sell him some seed of both kinds.

I have had other requests of this sort. I usually buy my onion seed, but sometimes grow a little Prizetaker for my own use, none to sell. What Welsh onion seed I grow goes to seedsmen. It is not difficult to grow good Prizetaker seed, however. But you must grow the bulbs first. It is true that the Prizetaker in recent years has been quite variable. I now find a good many white and red specimens among the crop. In years gone by these off specimens were rather rare. They are now common. Yet I am always able to grow very good onions from either the Prizetaker or the Gibraltar seed that I get from their first introducers. The Prizetaker was introduced in 1888 by Wm. H. Maule; the Gibraltar about ten years ago by W. Atlee Burpee & Co. The former variety is more generally offered by the seed trade. The other I believe is held more closely in the hands of its introducer. With either kind, however, I find it quite easy "to raise one hundred dollars' worth of onions from one-half pound of seed," and to sell a bushel of onions at one dollar when other onions sell but slowly at sixty or seventy-five cents.

◈

ASPARAGUS BEDS IN WINTER

J. B. W., a reader in Iowa, asks how he should treat his asparagus bed in winter—whether to cut the old tops and remove them, or leave them on until spring—also whether it be advisable to mulch the bed. The right way to manage is to cut the old tops in the fall, when the seeds begin to ripen and before any of them have had much of a chance to

An important and profitable industry, providing one has suitable soil, is the raising of onion seed. This is a scene of an onion-seed field, the bulbs of which are a fine strain of Yellow Globe. They came from a marsh in Lucas County, about twelve miles below Toledo. The seed is returned to the marsh, the principal crop of which is onions. The average yield of this field will be about three and one half pounds per bushel of bulbs planted. JESSIE M. GALLIER.

shed. Young asparagus plants that spring up from the scattered seeds in spring are often as bad as any weed. I would now cut the tops and remove them.

Asparagus does not only need a good deal of manure, but also a very mellow surface soil, so that the young and tender shoots can easily push through it to the surface in spring. Mulching with fine manure now, if it has not already been done in the fall, will furnish the needed plant foods and make the soil loose. But if a heavy coat of coarse manure is put on now it may retard the early growth of the crop next spring. So this mulch may be raked off in early spring, and left between the rows of asparagus until the ground has thawed out, and it may then be gradually worked back into the soil for the latter's great improvement in texture.

◈

ONION BLIGHT

A reader complains about having lost half of his onion plants for the past two years by what he calls blight. This may be the onion smut, which usually manifests itself in black streaks on the stalks. It only affects the seedling while quite young.

I have my own way of getting around this trouble. It is easily done by growing seedlings under glass and transplanting to the open ground in early spring. Our Prizetaker and Gibraltar onions never "blight" or smut in this way. It is safe to plant them even on ground infected with the spores of this disease. But when you grow onions on the old plan of sowing seed directly in open ground, and your onions have once been attacked by the disease, and the ground has thereby become infected, the only safety lies in adopting the transplanting method (the so-called "new onion culture"), or changing the location of the crop to a new and as yet uninfected field, or in abandoning onion growing for a number of years altogether.

There is also another disease which sometimes attacks the onion crop, known as onion mildew. This is somewhat similar to the downy mildew of the grape. The infection is carried over from year to year in the soil and in the refuse of the crop left in the field. It may be quite serious one year, however, and under other weather conditions fail to develop the next year in the same field. The destruction of all onion refuse and rubbish, and change of location, are the means of successfully fighting this disease. I have never been able to get much result from spraying with Bordeaux mixture.

◈

WINTERING CANNAS—TRANSPLANTING ASPARAGUS

C. R. P., Stockbridge, Michigan—Canna and elephant's ear are best wintered over in a dry, rather warm place, but it is especially important to have the temperature above freezing. A temperature of about forty-five to fifty-five degrees is a very excellent one, although they will often winter safely even at a much higher temperature, as they are so protected by their hardy covering that they do not dry out. There is very little care necessary for the wintering over of the ordinary large-growing cannas, but the large-flowering variety of cannas requires more care and should be placed in boxes of dry sand over winter. It is a good plan to cover all such bulbs with dry sand.

In regard to the best time for transplanting asparagus roots, as a rule little success attends transplanting them in autumn, and hence growers in the Northern states transplant only in spring.

The best fertilizer for asparagus is well-rotted stable manure. It should be plowed in deep. After plants are well started it will be found that occasional applications of nitrate of soda in the spring are very beneficial and very materially increase the yield.

◈

CELERY IN WINTER STORAGE

In any ordinary cool and damp house cellar, celery if stored with its roots intact and a little wet or damp soil adhering to them, of course perfectly upright, rather closely together and with the tops kept dry, will keep for a long time and make some new and beautifully white and tender growth. It is supposed that such a situation is rather dark and about the same as we would select for forcing winter rhubarb. The latter, however, will do first rate in a warmer place than usually provided for winter celery. Darkness or semi-darkness is essential for both crops.

I have some late celery stored in a portion of a cool greenhouse that had been boxed in purposely for winter rhubarb. The rhubarb has always done remarkably well here, grown in darkness and in a temperature seldom higher than forty to fifty-five degrees in the night or but little more in the daytime. The celery seems to do equally well. There is just heat enough coming in from the other part of the greenhouse, that is heated with hot-water pipes, to keep the temperature above freezing in very cold weather. The rhubarb bed was kept tightly covered on top. The celery is usually left without this cover, but boxed up all around, to exclude the light from the stalks. It keeps on growing and it blanches nicely. The stalks are brittle and sweet. No water has as yet been applied to it, and the roots are still moist enough to stand it for a long time. We shall probably have a supply of A No. 1 celery for some time to come.

◈

TO KILL MOLES

In reading a recent issue of Farm and Fireside I saw an inquiry as to the best way to exterminate moles. The following will prove very satisfactory: Take grubworms, angleworms or bits of fresh meat, roll them in Paris green, and place in the moles' runways. R. S. Dye.

◈

GROWING POP CORN FOR MARKET

An Ohio man asks about growing pop corn on an extensive scale for market. All the parties I know who have tried this quit about the second year. The market for it is very erratic. Just now it is quoted at one and one half to two cents a pound on the cob. Sometimes it is much lower. The parties who grew it in five-acre lots tell me that they had considerable trouble in marketing it, and they were obliged to accept all sorts of prices. They said they would not try it again except on contract. One grower was compelled to use over fifty bushels for poultry food. If this man can secure a contract for growing a few acres he might make it pay. Fred Grundy.

◈

ARSENICAL POISONS FOR SPRAYING

C. E. K., of Beaver County, Pennsylvania, says he has lost the paper in which I gave the formula for making arsenate of lead. He bought disparene ready made last spring, but he finds it too costly. I am afraid that arsenate of lead will be just as costly when the ingredients are bought at retail, as if it is purchased ready made in the form of disparene or under some other trade name. When large quantities are to be used, the ingredients may then be bought at wholesale prices, and the arsenate be made at much less expense than a small quantity would cost.

For my own use I prefer to buy the disparene in glass cans or in wooden kegs. When bought in quantity this poison is not unreasonably high, and its cost can hardly come into consideration when by its use we can ensure almost absolute immunity from insect injury to our crops.

◈

NITRATES FOR LAWN

"Is nitrate of soda a good fertilizer for lawns, and what amount should be applied per square yard?" asks a reader. Sometimes it is, sometimes not. I have seen excellent results from a light application. Then again I have applied it without seeing the least effect.

In cases where the nitrate alone does not seem to mend matters, you may try a dressing of lime with it, or still better, a dressing of wood ashes. This will surely give you a marked increase in growth.

◈

Our readers sometimes wonder if our guarantee about advertising is not a very costly policy. The truth is that we are so careful about the advertisements we publish that we receive but few kicks from dissatisfied subscribers. These few cases are generally only a slight misunderstanding, but we always see that our readers get fair treatment, even at our own expense. Read the guarantee on the editorial page of this number.

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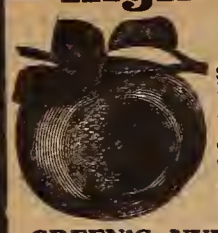

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SHEEP IN WESTERN OREGON

HAVING an equable climate, western Oregon is especially adapted to the raising of sheep, and nowhere does wool attain such a length and fineness of texture.

The day of raising large bands of sheep and having them cared for by a herder has passed in this section of the state. All available land is divided into farms, and the homesteads are mostly all taken up. There are vast tracts of timber land lying unfenced, but where there is a fairly good stand of timber it does not amount to anything as sheep pasture. The timber shades the ground, so that there is not sufficient grazing for the subsistence of sheep.

Many of the large farms support several hundred sheep, while the small farms and hill and mountain homesteads will have anywhere from ten to one hundred, according to the amount of cleared land on the homestead. The sheep owner aims to keep only what he can care for properly.

If sheep have a good pasture to run on during the winter, they do not need to be fed except for a week or two, while the snow is on the ground. They are often pastured on fall-sown grain during the winter, and some farmers sow rape, kale, etc., for winter pasturage along with what they get in their regular pasture. They do not need to be taken in at night during the rainy weather, like cattle and horses, although it is a good plan to have a shed or some shelter they can go to if they wish. They will stay out in preference to going to shelter unless it gets unusually cold.

Many farmers prefer to have the lambs come early in the year, before the grass gets a good start, so that by the time the grass is at its best, in April, May and June, the lambs are old enough to get the benefit of the greater flow of milk. The early lamb is larger in the fall and commands a better price than the late one.

The usual time of shearing sheep in western Oregon is in May and June, after the rains are over and before the wool has begun to shed. The early lambs are sometimes shorn in the fall, before the cold weather comes on. Lamb's wool brings a better price accordingly than the other wool.

The most successful sheep raisers sell the culls and the lambs that are to be sold in the fall, keeping only the select ones over winter, always with a view to building up the flock.

There are all breeds of sheep in western Oregon—Cotswolds, Shropshires, Merinos, Rambouillets, etc.—every farmer having his choice. Many of the better grades of ram lambs are shipped to Idaho, Montana, Wyoming and other states for breeding purposes.

In September buyers go out into the hills and mountains of western Oregon and buy up what sheep are for sale. It is surprising what large bands they can collect from the hill and mountain homesteads. The sheep of western Oregon are a source of large income to the farmers. The Willamette Valley especially is famed for the quality of its wool and the high grade of its sheep. The wool brings several cents a pound more than that raised in some other parts of the state.

To show what can be realized from sheep, the following is an illustration: In the fall of 1906 a resident of Benton County, in the heart of the Willamette Valley, bought four hundred ewes, paying four dollars and fifty cents a head. They averaged a lamb each. When sold the lambs averaged four dollars and fifty cents a head, or what the original flock cost. The wool clip was worth one dollar and seventy-five cents a head. The owner had the original stock left, and had an income of twenty-five hundred dollars in less than a year.

A common way of resting the farming land in western Oregon is to run sheep on it for a year or two, and the following year the crop will be almost doubled. It is thought by many to be a better method than to summer fallow. There is the profit of the sheep as against no income in the case of summer fallowing.

Another profitable use to which the sheep are put in western Oregon is to run in the hop yards to keep down the grass and extra vines that come up after the hops have been trained. They save much labor in the yards, and enrich the yards, while at the same time growing a profitable crop of wool and rearing the lambs. M. I. GELLATLY.

Live Stock and Dairy

THE COLT IN WINTER

The care of the colt in the winter time governs largely the value of the horse. A half-starved, stunted colt will never make the horse it might have been if it had been properly cared for. While the colt was running with the dam the farmer did not have to pay much attention to it; but now it has to be weaned and brought through the first winter—its critical period—and the farmer must give it his strict attention.

The colt will not be much trouble to wean if it has been made gentle beforehand and has been taught to eat grain. For this reason it is best to handle the colt while it is running with the mother. If they are around the barn a good deal, the farmer can catch the colt and rub him, or halter him and pull him about the barn lot teaching him to lead. If the mare is worked any, he can tie the colt to her side, and soon he will be halter wise.

In order that the colt may learn to eat it is best to feed the brood mare something during the summer, even if she is never worked. Give her some oats or bran each day in a box set in the pasture, and soon the colt will be eating with her. This will not only be beneficial to the colt, but will keep the mare in good flesh while she is providing strength for herself and colt during the suckling time.

At weaning time the colt can be haltered in a stall by itself. It will no doubt be a good plan to put him in a stall next to the mother. This will keep him from fretting at night. The rations of a young colt are also very important. His feed must be soft. He cannot bite the hard corn from the ear like the mother, and if he is fed corn at all it must be shelled before it is given. The best grain for a colt is oats and bran mixed. This not only supplies him with food like what he got from the dam, but keeps his bowels in good condition. Good, sweet hay should be put in the colt's manger in an abundant quantity. Musty hay or straw will not be eaten, and the man who gives it will be disappointed. If the timothy be mixed with clover, so much the better. The colt will pick out the sprigs of clover first, and there is no better grass for him. Alfalfa will be relished also, but it should be fed in moderate quantities.

It will be best to keep the colt in the barn until he has forgotten the mother, leading him out each day for water and a little exercise. After he has become weaned he may then be turned into a lot with a high fence around it, so that there will be no possibility of his learning to jump. Here he can get plenty of sunshine and exercise. If there are several colts, they may all be turned together in the same enclosure. Here they will run and play together, and will not get lonesome.

As winter comes on it is wise for the farmer to provide a good, warm stall for the colt. The best he can do for him in feed and shelter will not keep him in the best of flesh. His hair will grow long and his sides sink in. But a good shelter will be a great help in keeping him up in flesh. A colt that must run out in the sleet and snow and rain to old straw ricks or stalk fields cannot hold his own. Before the winter is half gone he will be poor and wabbly. The feed he gets will not supply both strength and warmth for his body. So the farmer must supply the warmth by keeping him in a good stall well protected from the biting winds and cold rains. This stall should be kept dry and well bedded. A colt, like an old horse, abominates a muddy place to stand or sleep. A good bedding of straw is what the colt enjoys and should have whenever needed. Some farmers provide large box stalls, in which they turn their colts in the winter time, and each night throw in a good-sized bunch of straw for them to lay on, cleaning it out again every morning.

The colt should be watered well. Don't turn him out with the grown stock to fight his way to a tank of ice water to drink. If you do he will be a long time getting there, and when he does, the water will be so cold that he will drink barely half enough. A half barrel set in the colt's stall and kept filled with water will be much better. If the weather is exceedingly cold it will be better not to put more in the barrel than the colt will drink each day. The water should be drawn from the well just before placing in the stall. It will keep from freezing much longer, and will be better for the colt, as he will drink more freely of it.

If the colt happens to become lousy, grease his back with a mixture of coal oil and lard. A lousy colt can never do well, and the farmer should watch very closely that he does not become so infected. W. D. NEALE.

PRODUCTION OF WHOLESOME MILK

Since milk is one of the principal articles of food for mankind, a great deal in the way of health and general enjoyment of life depends upon the wholesomeness of this animal product. This is particularly true in the case of babies in our large cities. Such facts bring us face to face with the problem of the production of pure milk.

Since the pure-food laws, in keeping with the federal statutes governing foods, have gone into effect in most of our states, the subject of sanitary-milk production has received more attention, and conditions to-day show an improvement over those of a year ago. This is encouraging and commendable and shows a disposition on the part of farmers and dairymen to obey the laws. Pure milk is imperative, and the only way to secure it is to awaken favorable sentiment among our farmers and hold up ideal conditions before them for producing sanitary milk. The boards of health in our large cities are more exacting as to the quality of milk than ever before, and they leave no stone unturned in their zeal to give satisfactory service. It is now up to the producer to bring his product up to the standard or quit business.

The first and important point about the dairy to be considered is the cow. Only healthful, vigorous animals are to be found in a well-regulated dairy.

The question of pure water for all domestic animals is very important, and especially is this so with the dairy cow. She, first of all, must have water free from dangerous germs or bacteria, else the milk will be unfit for use. In many cases typhoid and scarlet fevers, cholera morbus and cholera infantum have been traced directly to impure milk, caused by the dairy cows being forced to drink infected water.

Clean animals and clean stables make an admirable combination in the dairy. The stable should be so arranged that no cow should ever be compelled to lie down in her own excretions. The modern way is to have the stall floor just a trifle higher than the rear alley floor, and stanchion so arranged as to compel the animal to lie down and stand up on the elevated portion. An occasional coating of whitewash will make the stables more sanitary, because of its antiseptic qualities.

Before milking, every cow should be carefully groomed and every udder should be thoroughly cleansed with warm water; this not only secures cleanliness in milking by preventing clinging particles of dirt from falling into the milk, but such treatment also makes a better-looking and more contented animal.

A further observation of the rules of cleanliness is necessary in dealing with the milk after it has been drawn from the cow. All pails, cans, strainers, bottles and other receptacles, to ensure perfect sanitation, must be kept absolutely free from any semblance of dirt. As milk is a great absorbent of odors, it must not be kept in the stables a moment longer than necessary, and upon removal from here it should be cooled to a temperature of fifty degrees Fahrenheit. This latter step will tend to keep the milk from souring prematurely, and is especially valuable if shipment to some distant point is required.

Milk containers should be made air tight and dust proof, to prevent the entrance of dangerous bacteria in subsequent transportation to and handling in the city. Often milk has become charged with infectious germs after it has reached its distributing point, from failures of handlers to carefully observe the above precaution.

Attendants should be cleanly in their habits and dress. The custom of attiring the dairy helpers in clean white duck suits during the milking process is becoming more general and is strictly in keeping with the sanitary production of milk. Our dairy schools have set the example along this line, and as it certainly is a very commendable one, it should be followed everywhere.

An occasional examination of the dairy herd by competent veterinary or dairy expert and the disposing of all diseased animals will be found advantageous to the dairyman who is ambitious to please his patrons.

These requirements will be classed as too exacting and too closely ideal by many a dairyman who reads this; but every fair-minded milk producer must admit that these conditions, while hard to attain at once, are all feasible in time, and when fully met will prove a source of profit and satisfaction in the end.

The cost of running a dairy along these lines will be naturally increased; but when once a dairyman has gotten his reputation established for producing good milk, the increased profits from higher prices for the better-grade product will more than offset the increased cost of production. H. S. CHAMBERLAIN.

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A steer receiving a small amount of Dr. Hess Stock Food twice a day in his grain will consume, digest and assimilate larger quantities of coarse fodder and make steady growth from start to finish. This is because Dr. Hess Stock Food acts upon the digestive organs, keeping them in perfect health and activity.

Dr. Hess Stock Food is the prescription of Dr. Hess (M. D., D. V. S.) and contains tonics, iron and nitrates necessary to aid digestion, make good blood and cleanse the system.

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is a perfect animal tonic. It causes rapid growth, increases milk yield and insures good health and condition in all farm animals.

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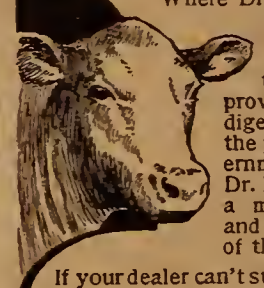

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a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

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Prof. J. B. Beery, Pleasant Hill, Ohio

ARMY AUCTION SALE BARGAINS—Large 250-page Illus. 1907 Catalogue mailed, 15c., stamps. FRANCIS BANNERMAN, 501 Broadway, New York.

Live Stock and Dairy

WINTER MANAGEMENT OF CATTLE

AT THIS season, for practical purposes and general convenience on breeding and feeding farms, a general separating and classing of cattle is necessary, so that each class of animals may have suitable treatment.

FEEDING CATTLE

This class probably requires the first consideration, and the utmost economy, as well as the best management, is necessary if this class of animals is to repay the feeder. One of the essentials that is conducive to economy is the comfortable housing of the animals to be fed, and this particularly with respect to warmth. A certain amount of food is required to be consumed by the animal for heating purposes before any is utilized for the formation of fat. Any excess of food, after a proper temperature is arrived at, is placed upon the muscles in the shape of fat. It is very essential, then, that for fattening purposes the animals be kept at a proper temperature. Warmth is equivalent to food.

The variations in the amount of food required by an animal are dependent in a great measure on temperature. In proportion to the temperature which an animal has to keep up will be the loss of the materials consumed in keeping up the animal heat. In addition to warmth, rest and comfort are necessary for feeding animals. Every movement causes a corresponding waste in the muscles that make it, so that no more exercise than is quite necessary for general health's sake should be allowed. Animals that sleep well gain more flesh than those that are more wakeful, so any plan that conduces to drowsiness should be adopted, such as darkening the shed after feeding is over.

Grooming feeding cattle is labor well spent, and frequently washing from head to tail, along the spine with a weak sanitary fluid will keep them free from lice. These little details will materially help in the general economy of feeding.

The time for each meal should be kept as punctually as possible, so that the animals are not fretting for the food. Whatever is the diet laid down, there can be no doubt but that the first meal of the day should be something easy of digestion, so that after the night's fast it may quickly be taken into the system. Hay chaff or straw chaff, scalded over night, mixed with pulped roots, with meal and cake added, and allowed to slightly ferment, to which a little linseed soup has been added, will form a good early morning meal. All-root rations must be considered too cold with which to start the day. A little hay to top off with is a good thing, and then the barn should be shut up, and the animals not disturbed until next feeding time.

DAIRY COWS

As this is the time that dairy produce obtains the highest price, cows should be receiving liberal diet, and will be pretty well dependent on manger feed.

It is customary on some farms to turn cows out on fine days in winter. If this is done, great care should be taken, as more harm than good may be done, although slight exercise may be of advantage. I have known milkmen, and they are men who should know the value of such treatment, to take their cows out whenever possible, and give them a good two-mile walk and allow them to graze as they strolled along.

SUCKLING HEIFERS

Heifers that have reared calves during the summer should have had the calves taken off. These animals should come down calving about next September. It is generally found that heifers suckling calves are rarely got in calf during that time, but when taken from the calf at the change of milk they may be turned to the bull at once, or allowed a month's rest, in which to get fresh and strong. During the time the heifers are with the bull they should be liberally fed, and when in calf a moderate diet is sufficient, a few roots with plenty of good straw and some hay, and a small allowance of cake. This latter food is not indispensable if heifers are in fair condition.

GROWING STOCK

Unlike feeding cattle, animals that are growing, to develop into healthy and well-grown cattle, require plenty of room and exercise; good, roomy yards with plenty of shelter accommodations are the right places for them.

They may be kept in good blooming condition with pulped roots and chaff, mixed over night or a day in advance, sprinkled with boiling water and flavored with salt, or common molasses dissolved in boiling water at the rate of one pound a day, with barley or wheat meal, or a small allowance of cake may be added to the pulped mixture. Too much importance cannot be attached to the benefit of having the pulped mixture prepared in advance, so that with a slight fermentation in the heap the food may be more digestible.

W. R. GILBERT.

FARMER FORSYTHE AT THE BREAKFAST TABLE

"A curious thing happened over in Williamson County the other day," remarked Farmer Forsythe of "Pleasant Pastures" at the breakfast table recently, as he helped himself to sugar and cream for his coffee. "A cow got drowned in a gallon bucket. Just think of such an accident as that."

"I don't believe it," interrupted his oldest son, Wetmore.

"That doesn't save the cow, though, son," smiled the father. "Now, Wetmore, listen while I tell you how it came about. The cow put her nose into the bucket, as there was some salt in it. Well, sir, she got the bucket wedged on her muzzle. As under the circumstances she couldn't free herself, she went to a pond and plunged her nose in over the bucket, which of course filled with water and drowned the cow, just the same as if she'd run into the Pacific Ocean."

"That sounds so much like a fish story," insisted Wetmore.

"I don't care what it sounds like to you—that won't save the cow, for she's sure enough dead. Now, Wetmore, and all of you, I want you to see that no buckets are left around, so our cows can get their noses in them. What's happened in Williamson County might happen on Pleasant Pastures. If you please, dear, I will take another cup."

W. J. B.

EMINENT LAD 72245

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SPECIAL ANNOUNCEMENT TO COW OWNERS

It is with more than ordinary enthusiasm that we beg to call the attention of cow owners and dairy farmers to the new 1908 line of the improved De Laval Cream Separators, consisting of ten machines, ranging in capacity from 135 lbs. to 1350 lbs. of milk per hour.

Although for a number of years De Laval machines have seemed as nearly perfect as separators could be, thousands of dollars have been and are being spent annually in the effort to improve them. The past two years of experiments and tests have been unusually productive of new ideas and big improvements in separator construction. Even the highest hopes of the De Laval experimental force and mechanical experts themselves have been exceeded.

The principal De Laval improvements are greater simplicity of construction, ease of cleaning and replacement of parts, less cost of repairs when necessary, easier hand operation, more complete separation under hard conditions, greater capacity and a material reduction of prices in proportion to capacity.

The line includes several new styles and capacities of machines never offered heretofore. No matter how small or how large the dairy the new De Laval line has a machine exactly suited for it.

If you intend buying a separator do not fail to examine the new De Laval styles before you make your selection, as otherwise you must surely regret it later on. A handsome new 1908 De Laval catalog can be had for the asking.

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NOTES FOR THE HOME DAIRY

Shortly after winter sets in many farmers begin to milk but once a day. This is not good for the cow and hurts the flavor of the milk as well. As long as you save the milk for family use, milk all out of the udder twice each day.

After straining milk, never put it in covered jars while warm. Besides making it injurious, it gives to it a very unpleasant taste, and if butter is made from cream taken from milk covered before the animal heat has had a chance to escape, the butter is of a very poor grade.

If one wishes to make winter butter and has trouble in bringing it, he will find it a great help, if before setting, the milk is placed over a kettle of hot water and brought up to one hundred and forty-five or one hundred and sixty degrees and then set in a cold room to raise its cream. The cream should never be allowed to freeze, and should be stirred twice daily or oftener. When ready to churn, the cream should be brought up to seventy degrees and kept at that temperature until it is ripe.

In salting butter the rule is one ounce of salt to one pound of butter.

H. E. Wood.

FEEDING THE BROOD SOW

If the brood sow has eaten her litter, there is no one to blame but yourself; sows that have been properly fed as a rule are not guilty of this offense, unless they have formed this habit at some previous farrowing date. I always feed my brood sows liberally, but on a ration as nearly balanced as possible. A sow that eats her litter craves nitrogenous foods.

Corn alone is not a balanced ration, and is not suitable for the brood sow. Some will say that their sows get no other kind of grain; but such sows running on a blue-grass pasture or around the barn yard are always on the hunt for something to eat, and get much more food than the corn provided for them.

A good grain ration for the brood sow is wheat bran and middlings and a little oil meal, which is very rich in protein, and a little corn added to supply animal heat. I never leave corn out of the ration entirely.

Sows at farrowing time should not be overfat; however, I prefer to have them a little fat than too thin. There is very little chance for her to lay on flesh while nursing a litter of pigs, and she will not nourish the pigs well if she has been low in flesh. She must always be fed liberally and regularly. R. B. Rushing.

LESSONS FROM THE INTERNATIONAL LIVE-STOCK SHOW

Individual experiences of beef-cattle breeders and feeders were to be obtained by moving among the herdsmen and exhibitors. Men who have won success from small beginnings were able to put up the most interesting stories. Not only did the men who came with the stock evince a willingness to tell "how they did it," but visitors who were stock breeders and feeders themselves were able interestingly to join in the chorus.

Some of the exhibitors of the show did but little talking about themselves, but others who knew all of the circumstances under which the modest cattlemen had won out by sheer hard work and persistency were able and willing to tell the story.

An Iowa exhibitor who came to the show with nine head of Angus cattle was only twenty-three years old. His father, who has been dead for some years, dealt in hay and hides and acquired a competency. He sold prairie hay and bought up and sold the cattle hides of several counties. He was a hard worker, had a good knowledge of cattle, but it is related he never would spend a dollar in the improvement of his herd. The boy, however, at a very early age developed this very instinct, and the people of the county say that he got it from his mother. She helped him, when he was about sixteen years old, to buy two cows then with calf. Later on he took a course in animal husbandry at the Ames Agricultural College. Besides the nine head of animals that he had brought to the International, a majority of which got blue ribbons, he left at home a herd of seventy-five head. The Chicago show was the tenth he had made during this season, and when he got to the stock yards he had won three thousand dollars in cash premiums. He sold a pair of Angus heifers for eight hundred dollars, and three others brought him five hundred dollars each. He had disposed of a number of bulls at from three hundred and fifty to five hundred dollars. He has a cow known to be worth two thousand five hundred dollars.

Another Iowa man had allowed his life to pass half away, although he has been a farmer from boyhood, before he took to the idea of improving his cattle. One day he fairly plunged into it by investing five hundred dollars in three Angus heifers and a bull. This was about four years ago. Since then he has sold one thousand dollars' worth of animals and has twelve head left. He sold five heifers and a bull for six hundred dollars. Four others brought him one hundred dollars each. All of the twelve animals that still remain on his farm are registered. Besides these he has sixty-five head of high-grade animals.

It was possible to find during the show a number of instances where young men particularly had commenced in a small way and had advanced their herds both in pure breeding and in increase of the herd. Some of these workers came from new territory, although of course most of them hailed from the Middle West. A West Virginia man came to the show with sixteen head of Hereford stock. He was a very young man when he began the work, and has kept on improving for eighteen years. He now is said to have the finest herd of Herefords in the East, and during the show captured one of the best prizes on a Hereford calf.

J. L. Graff.

CARE OF PIGS IN WINTER

A farmer cannot let the pigs run anywhere and sleep in any old place during the cold weather, and expect to get them through the winter in a strong and healthy condition. In fact, if he doesn't take more than ordinary care of them, there will be a number thrown into the bone yard before spring opens.

In the first place, pigs need a good warm bed to sleep in, not one that will become suffocating, but one where they can be comfortable during the coldest weather and yet have plenty of ventilation.

It will pay any farmer to prepare a special shed or hog house for the young pigs. It can be provided with an opening to the south, for sunshine and ventilation. A sliding or hinge door can also be fixed, so that the house can be closed at night if desirable. A good bed of straw or corn shucks can be made, which may be changed every few days to maintain cleanliness and prevent disease. Care should be taken to keep out larger swine, for fear that they may overlay the young pigs. It is best to not have too many pigs sleeping in the same bed, for they are apt to pile up and smother some. The bed should always be kept perfectly dry. For this reason the hog house should have a floor in it or be built on a high and dry piece of ground. Then the dirt floor should be higher than the surrounding surface of the earth, that the water may drain away from, and not into, the house.

The feed of the winter pigs is very important. They should not be fed corn alone. They need some succulent food after weaning, to keep their bowels in good condition. Especially is this true if they have been weaned rather late. Slops from the kitchen, if rich in milk and mixed with bran and shipstuff, make a splendid succulent food. Care must be taken to not feed them too much, or bowel trouble will ensue. Should this be the case, let up on the slops and give them burnt corn or some condition powder. Charcoal is also a good bowel regulator. The slops should be given in spacious troughs, so there will be room for all the pigs to drink at the same time. This will prevent the crowding out of some and the overeating of others. If the weather is exceedingly cold, it will be well to heat the slop, at least in the morning. Beside the slops and shelled corn, wheat and oats and rye mixed or fed separately will be healthful and hasten growth. It is a good idea to let them run to the barn in the daytime, as they will pick up a great deal of waste grain and the droppings from the milch cows. Never let the pigs get poor if you have to double their rations, for it is not economical in the long run.

Although the pigs are slopped once or twice each day, they should have access to plenty of clean water. If dependent on the slop they drink and the snow they eat they are apt to go thirsty part of the time. I know a successful raiser of winter pigs who keeps a trough close to a well, and once or twice each day he pumps fresh water for the pigs. They most always come to drink, and seem to appreciate the tempered water. W. D. Neale.

MANAGEMENT OF SOWS DURING PREGNANCY

In the management of sows during pregnancy, two facts must be borne in mind. The first is that the sow is doing double duty. Not only is she keeping up her own bodily functions, but the development of the fetal litter is a constantly increasing drain on her system.

Her feed should consist of grains and tubers rich in protein. The ration should never be allowed to become excessive in carbohydrates. One of the greatest dangers to avoid is constipation. Although feeding at this time will not need to be so heavy as after the pigs are farrowed, it should be liberal. The sow's condition should be good, neither too fat nor too lean. The error of allowing the sow to become fat would perhaps be least productive of serious consequences. It is hardly too much to say that the mistakes in feeding breeding animals are more frequently those that keep such stock in a thin, half-starved condition, under the idea that the reproductive organs are so peculiarly liable to become transformed into masses of fat that the least appearance of fat on the animal's back and ribs would be the first step in bringing about such unfortunate circumstances.

The use of the reproductive organs in either sex creates demands of an unusual nature on the animal's organism, and these demands must be met in the same manner as those of a different character, such as growth, work, etc., by providing liberal supplies of the proper kinds of feed. It is beyond reason that a sow can give birth to a strong litter of pigs after having gone through a four months' fast. Bad results are undoubtedly brought about by overfeeding, especially as sows are naturally indolent and loath to exercise; but a counteracting influence will be found in ample exercise, that may be provided by a large pasture, or even by driving slowly a mile or so each day. The necessity of exercise must not under any circumstances be overlooked.

It must be remembered, in the second place, that the main demands upon the sow are those for the building of new tissue. Hence, the kind of feed is important. What are known as the nitrogenous or protein-bearing feeds are needed at this time. These are bran, oil meal, peas, beans, oats and barley, and, to a moderate extent, wheat. The forage plants that are especially suitable to pregnant brood sows are the clovers and their relatives, alfalfa, peas, beans, vetches, etc. The ordinary pasture grasses are also of much value.

Feed should be given in such form that the system of the sow will be at its best. Corn should not be fed in large amounts to breeding stock. If possible, it should not be fed at all to any but fattening animals. If corn must make up the greater part of the ration of the brood sow, the injurious effects may be counteracted in a measure by compelling the sow to exercise. Various schemes may be necessary to bring about this result, such as having the house and feeding floor or the feeding floor and watering place at opposite ends of the hog lot, so that a good walk is a necessity several times each day. If the lot is located on the hillside, the walk is made a climb.

When the pastures become short the sows will need more care in order to keep them in good health. Not only does the hog's system crave green feed, but more or less bulk is demanded. This is especially needed when a considerable amount of confinement is necessary. To offset the lack of green feed, nothing surpasses roots. These may be sliced or pulped and mixed with the grain, or may be given whole as a noon feed. Some care must be used in feeding roots, as they are laxative in effect, and if fed in excessive amounts may bring about profuse action of the bowels.

Charcoal, ashes and salt should be accessible at all times. These act as a vermifuge and preventive of disease, and meet the hog's craving for mineral matter in the feed. The constant use of such a preparation with a varied ration will, in a large measure, prevent sows from eating their pigs at farrowing time. During the entire period care should be taken to keep the system well toned. The condition of the bowels is highly important, for pregnant and "down" pigging sows are subject to constipation, which may have serious results during farrowing. The sow should become accustomed to being handled, and should look upon her attendant as a friend.

All the brood sows may be allowed to run together up to within two weeks of farrowing time; then it is well to separate them, placing each sow by herself in a yard with a small house, which should be dry, airy and clean. A great deal of exercise will not now be necessary.

Wm. H. Underwood.

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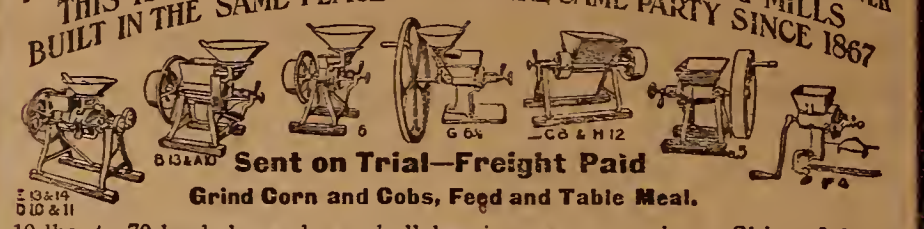

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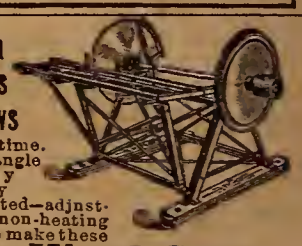

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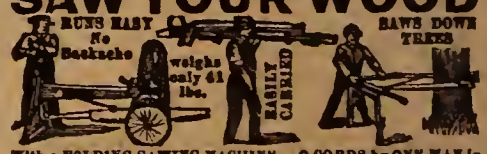

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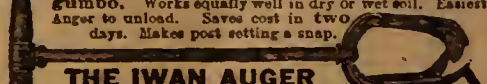

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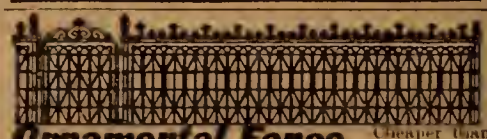

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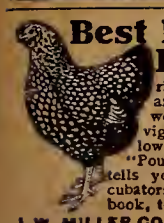

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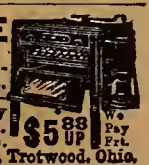
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Poultry Raising

WARMTH AT NIGHT

Some farmers believe that fowls should be kept warm at night, and aim to provide a little heat of some kind; but this is unnecessary. There is one thing that must be provided for, however, and that is the exclusion of all air or drafts at night when the fowls are on the roosts. Cold air flowing over the fowls is conducive to colds and diseases.

The fowls are provided with a natural coat, in which they sleep as well as use to wear outside in the coldest weather, and it is unnecessary to keep them warm at night. The heat of their bodies will provide all the warmth necessary, but in order for the fowls to have this natural heat within themselves it is necessary for the owner to provide proper food and exercise, keeping their blood in good condition and allowing them to be in that condition which is their inherent right—strong, hardy, healthy, and proof against storms and cold.

It is a fact, however, that when the birds are on the roosts they are inactive, while all the time they are outside they usually busy themselves scratching for their food, which keeps them warm. When in the poultry house they are usually asleep, although the poultry house is never as cold as the outside air. The heat from the bodies of the fowls assists to warm the room occupied by them, and for this reason they do not need artificial heat. If they are very warm at night, and then go out into the cold in the morning, they are very likely to catch cold or be subject to frosted feet and combs. Nature aids in protecting her creatures from cold both night and day, but she does not protect them from an airy, drafty poultry house.

◈

EGG BOUND

Egg bound is a disease rather rare among fowls, but now and then some one inquires about it. It is caused by a stoppage of some sort in the egg-producing organs of the hen, and if by proper feeding and judicious management it does not disappear, there is nothing to do except kill the hen affected. She will be good for the table, as it is not a disease, but rather a misfortune.

When old hens are seen continually sitting on the nest, as if desiring to deposit an egg, and then coming off again without so doing, it is a symptom of egg bound. If a young pullet, however, acts in that manner it is probably the motherly instinct asserting itself in her. Watch her carefully, and do not be in a hurry to dispose of her. She will make a good layer when she once begins. Egg bound in older hens, on the other hand, is almost incurable, and it is useless to waste time bothering with one hen if the poultryman has anything else to do.

◈

FLOOR LITTER

One who has not tried leaves or dry dirt on the floor of the poultry house knows nothing about the enjoyment of the hens from the use of litter. When the floor is well covered the house will be warmer than when the floors are bare, and the dampness will be lessened. The hens will also be kept at work. More cold winds come along the floor than from the walls, and this is avoided when the floor is kept well supplied with litter.

◈

EGGS IN WINTER

To get eggs in winter I feed scalded bran and milk in the morning, and wheat alternately with warmed or parched corn in the evenings.

On cold days I scatter grain in a pile of leaves or straw in the scratching shed, and make them dig for it, or cut corn on the cob and make them shell it.

I fix half a cabbage on a window-roller spring hung just out of reach, and make them jump for each bite. I have paid a dollar a barrel for cabbage just to feed to my hens. Boiled hog lights and butchers' scraps, chopped, also help.

CLIFFORD E. DAVIS.

◈

HENS AND INCUBATORS

During the first few days that the eggs are in the incubator they evaporate a large amount of moisture, the air bubbles increasing in size until this excessive moisture has been expelled. Later on they may absorb moisture, but for the first seven or eight days, if the air is too damp, this evaporation in the egg cannot take place. The amount of moisture contained in the outside air affects the air on the inside of the incubator, so the amount supplied in the incubator must be varied accordingly.

Experiments in using eggs under hens and incubators show that when eggs were put under the hen eight days, and then placed in an incubator, they almost invariably all hatched, indicating that the great fault was in the conditions the first week. The failure of hens at times to bring off broods may be traced to the same source, as some hens do not realize the rise in temperature in the nest, and remain on the eggs when they should leave their nest for a short while. It is very seldom, however, that the natural instinct of the mother will not compel her to do the things necessary for the welfare of her oncoming brood.

◈

WINTER EGGS

Possibly no man is so enthusiastic over the production of winter eggs as he who knows the least about it.

The writer keeps several hundred fowls, but makes no apology in confessing that he does not try to produce winter eggs.

Hens that have been laying all summer are out of condition and need rest. Fowls, as well as all other animals, require a period of normal rest each year in which to recuperate. We think that winter is the natural time in which to afford our hens a rest, consequently we carry them through cold weather on a purely maintenance ration.

During December and January we get few eggs. Our hens begin to lay in February, and continue until November; they have a wide range, and secure a large proportion of their food from foraging, consequently eggs during these months are produced at little expense. We were fully convinced long ago that there is more clear profit in summer eggs at twelve cents a dozen than in winter eggs at forty or fifty cents.

Early hatched pullets sometimes lay well during early winter, but the farmer seldom gets them hatched before April or May, in which case they are liable to disappoint the winter-egg hunter.

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◈

TO OUR READERS

If every reader of FARM AND FIRESIDE got just one neighbor to take it, the size of the FARM AND FIRESIDE family would be doubled and reach almost to the million mark. Do you realize what a gain this would be to you? The more there are to share the expense of a paper like FARM AND FIRESIDE, the more we can afford to give you for the price of your subscription. "But," you will say, "the more papers you print, the more it will cost you." That is true; but the fixed charges, as we call them, will *not* increase. By fixed charges we mean the price we pay to all the excellent writers and contributors for their articles; the cost of setting up the pages in type; the salary of every one, from the editor to the office boy, and so on. All this costs just the same if we have a hundred thousand or a million in the FARM AND FIRESIDE family.

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But whatever size the family may grow to, you will make no mistake in protecting yourself by sending in now fifty cents for three years' subscription, to start when your present subscription expires. That we can guarantee.

Quit knocking and go to work! Be satisfied with your lot, and succeed!

◈

If an animal is of inferior quality, do not use it for breeding purposes, no matter what its pedigree may be.

◈

If you are intending to buy commercial fertilizer, be sure that it is adapted to your land as well as to the crop you put it on.

◈

You can save yourself many miles of walking in a few years by having your feed lots and barns conveniently arranged.

◈

You may be able to cut down the running expenses of your farm by sowing more land to clover. Alfalfa might prove even more efficient.

◈

That farmer is happiest who realizes that his neighbor knows how to do something better than himself and tries to learn these methods.

◈

Be sure that you do not spend more for equipment and improvements than your business will warrant. If your farm is not paying you what it should for the money invested, it may be that you have not apportioned your capital well and have too much of it where it is not being utilized.

The man who has a home of his own is the best satisfied. If you have to use hired help on your farm, try to furnish them a cottage in which to live.

◈

You may be able to add some fertility to your land this year, and at the same time produce a large amount of nutritious feed, by planting some legume crop, such as soy beans or cow peas.

◈

The amount paid out for labor is an important item in farm operations. There are so many ways in which time can be economized or wasted that it should be given careful attention. The wise farmer will spend his leisure time during the winter months in seeing that all tools are in good repair, and thus prevent many annoying interruptions when the more important work comes on.

◈

Proper manuring and careful cultivation are important factors in producing good crops, but they will not be of much value if the seed is poor. Spend the rainy days during the spring months in making a thorough test of the seeds you intend to plant, and by discarding the poor seeds the returns from your crops will prove your rainy days the most valuable of the year.

◈

Farming is one of the creative industries, and the degree to which one succeeds in such an occupation depends on his ideals. The best that a farmer sees in live stock or crop or home surroundings becomes his ideal, and if he is an energetic man he will strive to make his crops, his live stock and his home come up to his ideals. The higher his ideals, the better his home life will be.

◈

The business man in the city, after the holiday trade, takes an inventory of his stock, balances up his accounts and knows just what the year has brought. He finds out where he lost and where he made gains, and has a fair standard to work by during the coming year. This is what every farmer should be doing now. Benefit by the past year's experience and do not let another year show the same failures.

◈

Extensive investigations are being carried on by various experiment stations to ascertain the methods of fertilization best adapted to the different soils and crops. In this connection tests have been made to determine the best combinations of different fertilizer and legume crops, the lasting effect of fertilizers, the comparative value of different fertilizers and manure, and the effect on the land of continued use of fertilizer.

◈

The postal savings-bank system of France was established in 1881. At the close of 1904 there were 7,883 postal savings banks, 4,345,446 depositors, and total deposits of $229,158,290. The average amount of each deposit was $52.79. October 31, 1907, the total deposits reached the sum of $267,519,423.

The interest rate on deposits is two and one half per cent, and the amount of each account is limited to 1,500 francs—$289.50.

These figures indicate the thrift and explain the prosperity of a multitude of French wage earners and small investors, and they furnish a striking object lesson for the American people. Let Congress give our people the same opportunity for the safe investment of small sums by carrying out Postmaster-General Meyer's recommendations.

◈

CHICAGO LIVE-STOCK TRADE

In a recent review of the live-stock business of Chicago President John A. Spoor of the Union Stock Yards and Transit Company says that 15,761,479 animals arrived at the Chicago live-stock market during 1907, and were sold for $326,540,600. For the market days of the year this makes an average daily business of considerably more than one million dollars. Imagine, if you can, a daily average of more than a thousand carloads of live stock of an average value exceeding one thousand dollars a carload, and you can form some idea of the business procession that passes through this great market place.

To help us comprehend the enormous volume of this business Mr. Spoor draws the following comparisons:

"The transactions on the live-stock market during the year more than doubled the total volume of business done on both sides of State Street for the whole twelve miles of its length. The value of the hogs alone was more than double that of the entire lumber trade of Chicago, and the cattle exceeded in value by many millions of dollars Chicago's total grain receipts, while the aggregate value of all the live stock received exceeded that of Chicago's wholesale trade in grain, lumber and dry goods combined, although Chicago leads the world in all three lines of business."

◈

THE GRANGE ENDORSED BY SECRETARY WILSON

In an address at the banquet which was recently given by the Pennsylvania State Grange, Secretary Wilson of the United States Department of Agriculture endorsed the Grange as "the most rational and sane organization this country has ever seen. It has been exerting a most salutary influence for years. It is an educational organization and it is high time that the farmers were educated to what they need. Should ten millions of dollars, or even more, be annually expended by the nation and states, and this be continued in a ratio of the increase of population, it may be confidently predicted that there will be agricultural schools for small children and secondary ones for those who are older, and that their education will be continued in the various agricultural colleges. Pennsylvania is the great state that it is to-day because it has always been interested in education. For this reason it has wielded a remarkable influence in the Union."

◈

REVISE THE OLEO LAW

Before the present federal oleomargarine law was enacted it was purposely made defective. A celebrated corporation senator put certain clauses in the original bill that have made it easy for unscrupulous manufacturers and dealers to violate the law and escape conviction. Fraudulent traffic has been assisted to the extent that now more than three fourths of the colored oleomargarine sold at retail is palmed off on customers as pure butter.

Farmers, dairymen and others interested in pure food now justly demand that congress revise the faulty laws that govern the manufacture and sale of all butter substitutes. The "knowingly" amendment, and the natural-color clause, in particular, must be eliminated. At their earliest opportunity the people will eliminate the man who is responsible for making them part of the law.

The total annual value of the dairy products of the United States is over five hundred million dollars. Instead of safeguarding this great agricultural industry, the oleo law was deliberately fixed to aid fraudulent competition against it. The farmers and dairymen now demand a "square deal."

◈

GRANGE NATIONAL BANKS

In a strong address to the Pennsylvania State Grange, Master W. F. Hill vigorously defended the new system of Grange national banks. He said, in part:

"The farmers of this country might as well make up their minds that if they are saved from being 'hewers of wood and drawers of water,' it must be done through their own efforts. The money panic recently started in Wall Street was, in my judgment, brought about deliberately by a party of big New York bankers.

"Those fellows think only of self and the accumulation of still larger wealth. "Apparently, they have little respect for God or man. Having started the panic, they have since been lying low to gather in the wreckage from the fortunes of other men. People are beginning to look upon the work of Wall Street as being dangerous to our country's welfare.

"The methods practised there will result in compelling outside people to pull together for their common interests. This latest move by Wall Street will do more to advance the interests of Grange banks than anything else that could have happened, and the sooner people of this country free themselves from the domination and control of Wall Street influence, the better."

◈

RESUMPTION OF WORK

One of the first effects of the financial panic was the closing down of some factories and the curtailment of work in many others. Suddenly many thousands of workmen were thrown out of employment. But just about as suddenly as the factories closed down they resumed operations. Some that shut down for a long period opened up with full force in less than three weeks' time. Railroads dismissed men and took them back in a short time.

The explanation of the agreeable phenomenon of prompt resumption of work is a very simple one. The currency flurry struck the manufacturing business at a time when there were practically no surplus products on hand. Manufacturers' warehouses and retailers' stores were not overburdened with stocks of goods. In very few lines had there been any overproduction. The supply of goods was barely ahead of the demand. The contraction of credit and the hoarding of currency, principally by scared bankers, made it difficult for many manufacturers to take care of their weekly pay rolls, and caused the temporary suspension of work. As soon as the bankers recovered from fright and the currency stringency was relieved, the stress of new orders, with empty warehouses, made it imperative for the factories to resume operations in full force.

Nor is there any overproduction of farm products. An increased demand for meats and breadstuffs and clothing will follow the general resumption of work, and restore prices to a normal level.

◈

BEWARE THE TRUST WOLVES

In a recent address at Chicago on "Obstacles to the Execution of the Law," Attorney-General Bonaparte made a statement that we shall do well to keep constantly in mind during the present political campaign for presidential nominations. After illustrating his argument with Æsop's fable about the wolves that persuaded the sheep to send away their watch dogs, and trust to the good faith and unselfish affection of the wolves for their protection, he said:

"Just now the denizens of that great sheepfold, the American Union, are beginning to turn their thoughts to the grave problem of choosing a head watch dog to guard them for four long years. I cannot help thinking it may aid them in this weighty task to establish, first of all, a negative test of fitness; whatever applicant for the job is viewed with particular favor by the wolves may well be left in his home kennel; wolves can be trusted to know what they want and to want what the sheep don't want.

"In plainer language, no man can be safely trusted to 'take care that the laws be faithfully executed' if his choice be longed for and urged by all or many of those who have obstructed the faithful execution of the same laws in the past, and whose influences and resources are formidable obstacles to their faithful execution today."

In the field now are a number of candidates for party nomination for guardianship of the great American sheephold. Some are good, faithful watch dogs; some are clever wolves, and others are wolves in sheep's clothing. The wolves are moving earth and the under world to get one of their own kind chosen. Let the voters beware.

Author and Singer of Sweetest Southern Songs

By W. D. Neale

PERHAPS in the entire Southland there is no better-known man than the late and lamented Colonel Will S. Hays, the veteran river editor of the Louisville "Courier Journal," and whose voice was stilled in death July 23d of the past year. Hays was a typical Kentuckian. All his life was spent in Louisville, with the exception of his college days and the months he was in the South during the sixties as war correspondent.

Early in life Colonel Hays began to show a talent for poetry and song writing. He composed more than five hundred ballads, many of which became famous. From his gifted pen flowed the grand old melodies, "Molly Darling," "Keep in de Middle ob de Road," "Shamus O'Brien," "Evangeline," "Old-Fashioned Roses Are Sweetest," "Little Old Log Cabin in de Lane" and "I'll Remember You, Love, in My Prayers." While in the South as war correspondent he became captain of "The Gray Eagle," a steamboat on the Mississippi, and when thus engaged wrote the famous song "My Southern Sunny Home." For this he was thrown into prison by General Butler, who was in charge of New Orleans. However, he was soon released. Then he returned to Louisville and entered newspaper work. This he followed until the close of life, writing his popular melodies at intervals and sending them out to cheer humanity.

"Every one of my songs," said Colonel Hays to a friend one day, "means something. There was a reason for its being written. Of course 'Mollie Darling' had the greatest vogue. There was a time when it was sung everywhere in America, and I have heard it in England, France, Germany, Italy and Spain."

Colonel Hays has told a pretty little story in connection with the writing of "Mollie Darling." It follows: "I had been writing songs for some time, and once each year I took a batch of them to New York to sell to a music dealer. At the time of which I speak I had ten songs, with the words and music, and I started up the river on a steamboat, intending to go as far as Pittsburg by water. By the time I reached Pittsburg I was ill of pneumonia. They carried me ashore to the Monongahela House, and there I was sick for several weeks. My attendant was an Irish girl named Mollie. She was a bright, sparkling, rosy-cheeked creature, just from the Emerald Isle, and she never seemed to weary of ministering to my wants. A hallman on the same floor was an Irishman, called Pat. It was not long until I learned they were sweet on each other.

Almost directly in front of my door was a big deep window, and in this Mollie and Pat were sitting. They thought me asleep, and I suppose I ought to have been. I heard Pat whisper, 'Do you love me, Mollie Darlin'?' Mollie made no reply, but nestled closer. 'Let your answer be a kiss,' again whispered Pat. There was a slight scuffle in the window, and then they went away. But all through that night the words kept running through my mind. 'Do you love me, Mollie Darling? Let your answer be a kiss.' I was still weak and nervous, as would have been expected of a man who had been so sick. Then I began to hum it to the very same tune that countless thousands have since hummed and sung. In the morning Pat assisted me to dress, and then Mollie came in to tidy up my room a bit. I sat down at the wash stand and scribbled off the song in its entirety as I had composed it in bed. I said nothing to Pat and Mollie. They took me down to breakfast, and all the old river men and my other friends were glad to see me. Then, as we rose to leave the table, I asked them to step into the parlor, and especially requested that Pat and Mollie, who had been so good to me, go with us. I said I longed to play and sing something, and wished them to hear it. Everybody went along, and I sat at the piano, played and sang 'Mollie Darling.' It made a hit with the company, and everybody crowded about to congratulate me. The last was Mollie. She leaned over my shoulder. Her face was red as a rose when she whispered, 'An' did yez hear th' answer I give him?'"

COLONEL WILL S. HAYS

"Keep in de Middle ob de Road" was also written on the impulse of the moment. The Colonel said that one day he was walking along a country road down in the mountains of Kentucky, when he beheld an old negress with stick in hand driving her "ole man" along before her. The road was steep on each side, and he was staggering along in his drunkenness. Every time he wabbled over near the embankment the old woman would strike him with her stick, and shout, "Keep in de middle ob de road! Don't you look to de right, don't you look to de left, but keep in de middle ob de road!" When he returned to his hotel he sat down and wrote the song. He found an organ in the hotel, and played the song there for the first time. He sold it for ten dollars, and it made a hit.

One night Colonel Hays went down to the levee in Louisville. On his way back to his office he heard the voice of a weary woman say plaintively, "Oh, Shamus O'Brien, why don't you come home! You don't know how happy I'd be!" These words kept ringing in his ears all the way up the street, which was settled with Irish families. When he arrived at his home he took down his banjo and composed the music and words to one of the most popular Irish songs that was ever written.

Colonel Hays was standing at the Louisville wharf one time when the "Robert E. Lee" was loading, and heard the darkies yelling:

De Capting's in a hurry,
An' I knows what he means.
He wants ter beat de "Natchez"
Way down ter Noo Awleans.

He hurried back home and wrote the song "Roll Out and Heave Dat Cotton." As he has said, the rousters are singing it yet. Often they substitute other names for the boats, but it is the same old song.

One June the Ohio River was on a rampage. Colonel Hays took a pleasure party of his friends down the river on an excursion. They landed at a country town in Kentucky and took a walk. There were a number of ladies in the crowd, and they spent most of their time at a hothouse belonging to one of the most prominent residents of the place. The owner supplied them with a lot of rare and costly cut flowers. But Colonel Hays wandered away from them and stopped in front of the home of an old negress. In her yard was a large old-fashioned rose bush. The old woman cut him a bunch of the roses and was delighted with his praise of her modest flowers. On their return trip several of the ladies went up to the pilot house, where Colonel Hays stood at the wheel, and noticed the flowers. Immediately they explained that he might have had some of their flowers, but he replied that the old-fashioned roses were sweetest to him. He said, "The wheels churned 'round and 'round and the machinery of the boat groaned and creaked and slowly resolved into the song 'Old-Fashioned Roses Are Sweetest.'"

In explaining how the "Little Old Log Cabin in de Lane" came to be written, he said, "I had a habit of getting off the boat when I was pilot on the Ohio River during the times we were loading or unloading, and wandering about the town. On one occasion I passed a dilapidated old shanty with the roof tumbled in and an old negro and a dog standing at the rickety gate.

An' de hinges dey got rusty, an' de doah hit tumbled in,
An' de roof lets in de sunshine an' de rain;
De only frien' dat's lef' me am dat little dog ob mine
An' dat little ole log cabin in de lane.

"Why, those words simply wrote themselves in my mind. It was easy to finish the song and no trouble to form the plaintive air accompanying the words."

When Colonel Hays was but a small boy he had a sweetheart who was very religious. She became exercised over his spiritual condition, and once told him that she used to stand at her window at night and look out at the sky and pray for him. It made a deep impression upon his mind, and in after years he wrote, in remembrance of the event, "I'll Remember You, Love, in My Prayers." The first two lines made the song.

When the curtains of night are pinned back by the stars,
And the beautiful moon mounts the sky.

The story of "Evangeline" is rather peculiar. Here it is in Colonel Hays' own language: "There was an Evangeline, and that was her name. When my hair was not white as snow, and there were no wrinkles in my face, I had a sweetheart by that name, and she was a society girl in Louisville. She didn't care a snap for me. She saw I was becoming popular with my songs and thought it would be something to boast of to be able to say she had me on her string. A party of us went out in the country to spend the day, and a heavy rain came up. We sought shelter under a rude shed, and built a fire. Evangeline said she wished I would write a song about her. There was not a scrap of paper or a pencil in the crowd, so I snatched a piece of charred wood from the fire, went over to a high board fence and scrawled the words and music to 'Evangeline.'"

Colonel Hays never accumulated a fortune from his compositions, like many song writers. He sold them outright for a paltry sum. He declared that one thousand dollars would cover what he earned in the past sixty years from his songs. He did not write them for money, but because he loved to. They were the spontaneous outbursts of his musical nature. For this reason he reached the heart in his songs. They were about plain everyday people, and their words and melodies therefore charmed the masses. He was content to know these simple melodies brought some brightness into other lives.

The Way of the Great North Country

By Aubrey Fullerton

THEY do unusual things in the North and think nothing of it. The unusual is turned into the usual, and the extraordinary into the commonplace. For the North is the land of paradoxes—the country of fascinating surprises and daring deeds on the one hand, and of monotony and appalling distances on the other. It's the place where people do things they never did before.

Northerners work, play and travel differently from any other people in America, because the country is different. A region of far-flung distances like the plains of the West and North encourages uniqueness. One must think, act and move in terms of space, or the vastness of the West and the remoteness of the North will bear him down. The people who like the North are they who laugh at its obstacles and count ten miles as one.

Away up in the Alaska-Yukon country a man tramped from Fairbanks to Dawson alone and without even snowshoes. He had promised to meet his wife at Dawson, and having missed the last steamer of the season, set out afoot over the ice of the Yukon River. It was a long and lonely and perilous tramp, lightened only by a sense of duty to an expectant wife. He owed his life to two bunches of newspapers which he took with him and with which he was able to kindle fires along the way. Even so, he narrowly escaped death in the almost Arctic cold.

The wife of another Yukon miner, fifty miles beyond Dawson, was at the point of death, and the doctor said that only fresh milk would save her. The nearest milk to be had was at Dawson, and the mercury stood at seventy below. No stage runs at seventy below, for money or government. But it went for a neighborliness' sake, and two of the toughest Yukon horses, blanketed and nose bagged, and one of the Yukon's ablest stage drivers, wrapped in furs and with boots of felt, made the hundred-mile trip. What that meant is known only to those who have had experience of away-down-below-zero weather. But the milk was gotten, and the woman's life was saved.

Three winters ago a woman mushed fourteen hundred and fifty miles from Rampart, in the heart of Alaska, to Whitehorse, the terminus of the White Pass Railway. She did it alone, too, and in the dead of a deadly winter. With her train of dogs she made an average of twenty-five miles a day, and on one or two days covered thirty-five miles. That is good traveling on the winter trail, even for a man Northerner, and especially so by reason of the fact that for the greater part of the way she ran, not rode, holding only by her hands to the bars of the dog sleigh, for on some days it was too cold to ride—fifty and sixty and seventy below zero, which means, of course, that a person must "move or freeze."

Just like a man, just as bravely and skilfully as any Master of the North, this woman musher rode and tramped, sometimes breaking a way ahead for the dogs when the zero fog was too dense for them to see. Just like a man, too, when out of reach of the roadhouses, she made camp at nighttime, beside the trail, and slept the deep warm sleep of the outdoor North.

A hole dug in the snow for a bed, a few fir branches for a mattress, and her Arctic dog robes for bedspreads, she lay herself down to sleep, alone, and at gray dawn she was up and off again. Not many women could have done it, but this woman did it, and suffered nothing more serious than the loss of a few pounds of weight in her two months on the winter trail.

They make unique honeymoon trips, too, in the North. A young woman went to Atlin, a British Columbia mining town, to visit her brother. She met a miner there, they fell in love, they named a day, and were duly married. Now, this miner was a Dawson man, and it was his plan to take his bride to Dawson at once. But they were already too late in the season to catch the last steamer up the Yukon. They waited, therefore, a month at Whitehorse, and when the first snow came, set out for home overland. A strange bridal outfit, it was—dogs, and grub box, and a sled big enough for two—and an arduous bridal tour ahead of them, via the Yukon winter trail. But they traveled by easy stages, had a good time, and were none the worse when they reached Dawson.

It was left for a British Columbia bride and groom, however, to devise and carry out a honeymoon surpassing even these in uniqueness. Married in southeast Kootenai two Octobers ago, they set out the day after the wedding for the Black Diamond Mine, away up in the Rockies, where there's eternal snow. They knew of a cozy log cabin there, overhung by fir trees in a sheltered hollow, and into this they moved their winter's supplies and themselves. Robinson Crusoe, or Thoreau, or even John Burroughs, would have been interested in this hermitage experiment; for although there were two hermits instead of one, the forbidding aspect of their mountain home and its inaccessibility as completely isolated them for a time as Crusoe himself. From November until the spring thaws loosened up the mountain snows they were quite cut off from communication with the outside world.

We have been left to imagine the jolly times the two had by themselves through those winter months—the zero nights and snow-bound mornings, the honeymoon housekeeping and log-fire musings within their one-roomed shack, the majestic winter scenery to look upon and their two lone hearts to look into. It was surely risky, but that's the way they do things in the great North country.

The Imposter

By Frank E Channon

Synopsis of Previous Chapters

Amos Jackson, rich American, athlete, and his lawyer and fellow countryman, Donnaly. were returning from the Stanford Bridge Athletic Grounds, England, where the former bad won great bonors, when tbey stop a runaway tandem, make some new acquaintances, and receive an invitation to dinner. The hosts prove to be the Queen, and her uncle and aunt, of tbe island kingdom of Mirtheium. While on a tour of the Continent the royal party had met witb a terrible loss in the sudden deatb of the King, since whicb time return to the island bad been repeatedly postponed, for it was feared that to return witbout a king meant tbe overthrow of the dynasty. Jackson in appearance proves to be a double of the late King, and the proposition is made that the American atblete return with the royal party as ruler of Mirtheium. During the interview a spy of the Cassell party of Mirtheium, is discovered bebind tbe draperies. He is captured, branded as a lunatic, and turned over to a private sanatorium for safekeeping. Tbe royal party, augmented by the "Imposter" and bis "new American secretary," return to the island and are welcomed with great pomp and ceremony. During the ride to tbe palace an anarchist hurls a bomb that drops in the royal carriage. The King, witb great presence of mind, quickly throws it out of danger, saving bis own life as well as that of his queen and many subjects. Tbe bomb thrower is captured, and instead of his deatb sentence the King gives bim "a licking witbin an inch of bis life," and then puts him to work, hoping to reform bim. Donnaly and the King decide to send to New York for the latter's pet experiment, bis airsbip. During the review of troops, "Jessup," the dead King's faithful dog, barks viciously at the King's carriage, and by its otber strange antics causes many to wonder, and raises marked suspicion upon the part of Duke Rudolf. Tbe King's love for the Queen becomes apparent, but bis hopes are rudely shattered wben in tbe evening he and Donnaly discover Rudolf and tbe Queen in the garden, see the Duke kiss the Queen, and hear perplexing conversation. That nigbt tbe palace is fired.

CHAPTER IX.—CONTINUED

DONNALY jostled his way through a motley assemblage of servants and officials, shouting, "The King! The King is cut off!" hut in his excitement he was outcrying in English, and not a soul understood. One or two recognized the secretary, and dashed after him. He ran into a squad of firemen on the terrace; they were coupling up a hose. There was no time for explanation.

"Les Regal! Les Regal! The King! The King!" he bellowed, "Follow me!"

He leaped to the stone baluster and swarmed up the column ahove it. He gained the upper terrace. Two daring men followed him. The whole landing was a mass of fire; the fierce yellow flames were licking the roof ahove. But now, utterly beside himself with horror and anguish, nothing could stay the American. He broke in through one of the glowing windows, and shouting wildly for his chum, begging, threatening, entreating, swearing, was swallowed up in the fiery mass.

The flames licked him greedily, as if hungry for their prey; the smoke suffocated him; and with desperate resolve and mad energy he fought his way through. A thousand times he blamed himself for heing heaten back hefore. Nothing should stop him now; he would find Amos or quit the game. It was death or victory! He could not call him; he could not shout; it was a blind, mute struggle. And then suddenly to the right above him he heard cries for help; it was the Qucen's voice: then the strong, resolute tones of his chum: "Hold now there, I'm coming!"

Hc turned and fought his way up a winding stairway, a great wave of gratitude and relief sweeping through him. Amos was safe; he was above him secking the Queen. He was getting above the fire zone now: it's hot, black breath came up to him in heavy gusts. Next moment he stood on the open terracc of the third floor, high abovc the devouring flames.

"Amos! Amos!" he shoutcd.

"Here — hcre you are. Help mc along with her. Look to the Countess."

No one would have recognized in the two torn, blackened, bleeding figurcs the King and his secretary. No onc was there to try, for the Count had been cut off in his apartments below somc ten minutes beforc, and the servants had deserted or been overcome by the fire.

"You can't get through," cried Donnaly, for Amos was endeavoring to struggle back the way he came.

The flames crackled and roared beneath them; they were reaching up in haste for their prey. The crash of falling timbers and stone work sounded around. Quick work must be done, or it was death.

Donnaly had lifted up the unconscious Countess; Amos was hustling along the nearly frantic Queen. They dashed to the high east wall of the terrace, which overlooked the town. Seventy feet beneath them the mob shouted and warned them. Two servants, crazed with fright, leaped from the floor below; they fell with a dull thud on the paving of the courtyard. A squad of firemen swept, with a shout, around the corner. With feverish haste they ran up their ladders. A story too short. Another again they try. It lacked twenty feet. They splieed them. It was a race with death. And then the ladders crash against the parapet, and grasping their human burdens, the two Americans swung themselves over.

"Steady, there," cried the King. "One at a time. It won't stand us both."

"Over you go, then!" and Donnaly hustled Amos to the coping. There was no time for words. The King was on the topmost rung; the Queen was in his arms, and he swung himself slowly down.

"It won't stand all!" was Donnaly's warning. "Get down quickly; I'll follow."

The crowd below stood watching breathlessly. There were a few moments of agonizing suspense, then a tèrrific shout told that the Queen and her rescuer were safe.

Donnaly seized the fainting Countess and followed. Not so strong a man as his chum, and weighted with a heavier burden, it was all he could do to support her. He worked on slowly down, while the mob waited with hated breath. He passed the dangerously weak spliced part, then realized he could hold his hurden no longer. "Take her, quick!" he cried.

A fireman dashed up the ladder, and caught the woman in his arms just as the now utterly exhausted Donnaly swayed unsteadily and then toppled over fifteen feet to the ground below. He carried the fireman and his hurden with him, as he fell, but half a dozen brave fellows broke their fall, and next moment willing hands were hearing them away to safety.

CHAPTER X.

FOUL PLAY

THE first man who faced the King and his consort, as they reached the ground, was Duke Rudolf, of Roumania. He was wildly excited.

"My God! My God!" he habbled, as he sought to embrace the Queen. "You are safe! You are safe! Thank God! I thought you were spending the night at the château."

"Stand back, sir!" commanded the King sternly, as he pushed away the excited Duke. "Her Majesty is unconscious. She has fainted. Give her air."

The Count Benidect and half a dozen other nobles were crowded around the royal couple.

"The Countess is safe!" cried Amos. "Donnaly is bringing her down."

"Room there!" shouted the workers. "He can scarce make it. Now then! Now then!" and with their own hodies they broke the secretary's fall.

"Stand clear, stand clear there! Back, get hack. The walls are going!"

And the King's party was hustled away.

Their way was through a cheering, howling mob, which ever and again burst through the cordon of police which surrounded them, and sought by every demonstration to show their love and enthusiasm for their monarch, and their appreciation of his kingly and gallant conduct.

Amos was at the zenith of his power and the height of his popularity. Twice a hero since his return, he was in the eyes of his people but little short of the gods; they adored him. The less conspicuous but equally gallant Donnaly was to some extent obscured and lost sight of in the dazzling brilliancy of his chum's fame.

Carriages were soon procured, and the party drove off at a rapid rate to the Dalvine Château, which lay about a mile from the hurned palace, on the Marine Road. Neither Amos nor Donnaly were seriously hurt, although badly singed and disfigured. The Queen had been more frightened than damaged, hut the Countess was hadly hurned, and was in a state of collapse. How many people had lost their lives in the terrible catastrophe was as yet unknown, but more than a dozen were unaccounted for. Three had been fatally injured hy leaping from the windows, and it was feared that many bodies would be discovered in the ruins. The palace itself was a ruin. It's massive walls were still standing, although the west face was momentarily expected to collapse, but the interior was gutted. But little of its magnificent fixtures had been saved, the fire seemingly having obtained tremendous headway before being discovered. The origin of the disastrous conflagration was at present a mystery.

No sooner had the King arrived at the château than he set an example of American enterprise and energy. Hastily attending to such few scratches and hurts as he had received, he called for a horse, and leaving the exhausted Donnaly to recuperate, rode unattended hack to the scene of the fire.

It was scarcely under control when he arrived, hut was fast hurning itself out. The firemen, aided hy many volunteers, were playing their hose upon the embers and fast making themselves masters of the situation. He disclosed his identity to the chief, and expressed a wish to make such investigation as the state of the building might permit. Half a dozen men were detailed to assist and guard him. The chief, a bluff, hearty old sea dog, whose life had been spent upon the ocean, warned him of the danger, and particularly of the tottering west walls.

"Have a care, sire!" he called bluntly. "Except at your orders, I would hesitate to order even my own men in as yet."

The exploring party entered at the south side, and cautiously madc their way through the smoldering débris toward the main grand stairway. This, being built of massive marhle blocks, had escaped the flames, and the King was on the point of ascending, when a thought struck him.

"The prisoners in the cells, have they all been released?" he anxiously inquired, turning toward his men.

"My God, no one has thought of them, Your Majesty!"

"Quick!" cried the King, hastily turning, and starting on a dead run toward the lower floors. There had flashed through his mind the thought of the anarchist imprisoned helplessly in the large cell room. Had he been released?

The huge slahs of granite and marble which composed the main floor had successfully resisted the weight of falling timbers and girders. Apparently all below was safe; there was hope for the captive.

One of the men spoke to the King:

"There are no prisoners in confinement, they say, Your Majesty."

"Yes, there is one, the anarchist," replied Amos.

"'Twere well to let him stay," muttered the man.

"No, he must be hrought out," said the King sharply.

Long hefore they reached the cell they could hear the cries of the poor wretch. The door was of course locked, and the key missing.

"Batter it down!" came the order.

A heavy beam was used as a ram, and with the united efforts of all it was hurst open. The prisoner was cowering, panic stricken, in the further corner. Amos strode over, and lifting him up, led him out.

"Place him in safe keeping until I call for him," he said, turning the prisoner over to two of his men. "Let no harm come to him."

In haste they ascended again, and recommenced their search. At the top of the first landing they came across the body of a maid servant. The smoke had evidently overpowered her as she was seeking an escape. They laid her reverently on one side until they should return. Passing on, they made their way into the east section of the palace. Here the fire seemed to have made no headway; it had probably been checked by the men before the flames could leap the broad, intervening inner court, which separated it from the rest of the palace. They crossed the famed Florentine bridge which connected the wing.

"Nothing here; all safe," remarked the King. "Work on around the front. Why, hallo, what the —"

He stopped short, and stood looking blankly at some small pools at his feet. Next moment he was down on his hands and knees. A well-known odor assailed his nostrils. He arose hastily, and passing over to some lounges which stood in the hallway, felt their heavily upholstered seats and carved oak backs. He ran his hand over the massive writing table, with its reference books, all untouched by the flames, left just as they were the night before. It was covered with an oily fluid.

In an instant the hideous truth flashed across his mind. His hand was wet with PETROLEUM.

The walls, the floors, the furniture, were covered with the inflammable oil. Small wonder the flames burned so fiercely and made such rapid progress. The intervening court and the play of the firemen's hose had saved this outer apartment, and the fiendish incendiary's work was disclosed. For a moment the King stood looking blankly at the telltale oil; a wicked oath escaped his lips.

"Men," he said, turning toward his escort, "I require you each to look upon this. Put your hands in it. Smell it. Tell me, what is it?"

A cry of surprise hurst from each.

"It is neussioum (flame oil)," they cried.

"It is," said the King. "Now I charge us all that you bear witness of this, but speak to no one of it, do you understand?"

"We do, sire."

"To no one," the King reiterated emphatically, "It is my decrec. I put each man upon his honor, but I charge you all that when the time comes to speak of it, you shall be positivc. Feel it, smell again. Are you sure? It is firc oil, is it not?"

"It is, sire."

"Vcry good. Let us proceed further. Perhaps somc other surprise may be in store for us. Forward!"

As they worked toward the front they mct a party of firemen, who had scaled the broken walls and were playing upon the smoldering ruins.

Two more bodies were found at this point, and further on a man, still alive, but mortally wounded by falling timbers.

Nothing more rewarded the King's investigations, and

"'It is somewhat galling to members of your family to be . . . . cross-examined by a comparative stranger'"

just as the morning sun was rising he remounted his horse and started back for the château, attended by two aid-de-camps, who had been despatched by the Captain of the Guard from the château to wait on him.

A guard had been established all around the ruined palace, and no one was allowed to enter without a pass. Before leaving, Amos had summoned the chief and drew his attention to the devilish work he had discovered in the east wing, and now he sought his chum and laid the facts before him. He had great faith in Donnaly's wisdom, and wanted his advice before taking further steps.

The secretary, who had been snatching a few hours' rest, at once set off for the scene of the fire, to see with his own eyes the evidence of the firebug's work. On his advice, the Count Benidect was taken into their confidence and accompanied him. The Queen and the Countess, both utterly prostrated by their night's terrible experiences, were resting, and were not disturbed.

The old Count could scarce credit the story which the King related.

"It seems incredible," he kept repeating. "I have long known that we have had enemies and plotters, but that they could descend to such work, I never imagined, yet it must have emanated from some political party, for our bandits, such as we are troubled with, always remain in their mountain fastnesses, never venturing into the town. The Count Cassell's party contains some rough and dangerous characters, but I am sure that neither he nor Duke Rudolf would sanction such work."

"Tell me, Count," inquired Donnaly, "was it generally known that the Queen was to spend the night at the château and that the King remained at the palace?"

"Yes, it was common information among the household servants."

"Why were her plans changed?"

"Why, toward noon Her Majesty expressed a wish to remain; she complained of being indisposed—nothing serious, just a headache or something of that sort—and my wife decided to remain, also. I, too, should have accompanied them, but for the change."

"Did Her Majesty go directly to her apartments after leaving us? You will perhaps recollect that you escorted her, Count."

"So far as I am aware, yes, but I am not certain on that point. I left her with the Countess discussing some arrangements for the forthcoming court ball. I can easily ascertain that if you think it material. Tell me, sir, why do you attach importance to her movements?"

"I am endeavoring," said Donnaly, "to gather information as to whether or not many people were aware of her plans and movements, for it is very evident that this dastardly work was an attempt upon the King and Queen's lives, or upon one of them, at least. I say it is very evident to my mind. Do you agree with me?"

"It seems incredible, I repeat. The idea is horrible, horrible, and yet, and yet—"

"It might be?" suggested Donnaly. "Eh, Count?"

"It is possible; in fact, as you say, it looks probable, but—who—who?"

"That's the question!" cried the secretary. "Who? And that's just what we must find out."

"Have you any suspicions? Tell me," appealed the Count.

"I may have suspicions, but they are not sufficiently well founded for me to mention them as yet. It would be unfair, unjust, for me to moot them now. Recollect, Count, I have not yet even seen the evidences of this foul play. I only know what the King has told, and hearsay evidence, you know, never goes in a court."

"Let us hasten. I am anxious to see," cried the Count.

"Now another point I wish to ask of you," continued the secretary, "is, do you think it possible for any great quantity of this inflammable oil to have been stored in or near the palace without any of the officials being aware of it?"

"I should say not."

"Then it follows that in the event of this being, as we are supposing, the work of some incendiary, his plans and purposes must have been known to others; that there were two or more people in the plot. That is so, is it not?"

"That would follow," admitted the Count.

"Here we are!" cried Donnaly, as they drew rein before the smoldering ruins. "Now then, Count, we will enter. You know the way better than I. Please lead the way."

◈

Chapter XI.

THE EAVESDROPPER

They made their way directly toward the east wing and entered the untouched lobby. Both looked up in surprise. A man was standing directly in front of them. His back was turned toward them, but as they entered he wheeled around.

It was Duke Rudolf.

He greeted them hastily.

"Here is a most perplexing thing," he said. "This apartment is reeking with petroleum. It looks like foul play, Count."

"We have come to see the same evidence," gravely said the old gentleman. "Information was brought to us, and we hastened over."

"Are the Queen and Countess recovered?" inquired Rudolf.

"They are better, but still terribly nervous and overwrought. It is a terrible thing, a most terrible thing."

Donnaly was eyeing the Duke closely. Speaking very quietly, as if only for the Count to hear, he remarked:

"It was most unfortunate that their plans were changed."

Rudolf caught the words, and looked up quickly.

"Their plans? Changed?" he questioned, looking perplexed.

"Yes; it was intended for them to spend the night at the Dalvine Château."

"Why, as late as last evening—" the Duke commenced, then checked himself. "Why, the change was sudden, was it not?"

"It was arranged for them to go in the forenoon, but the plans were changed after lunch."

"Indeed it was most unfortunate that they were. They might have been spared all this terrible experience."

"Most unfortunate," echoed the Count.

"I must congratulate you, Monsieur Donnaly, on your escape, and also on your very gallant conduct. His Majesty, too, has shown the true blood of the Vaultineer family; he was most heroic. I am about to visit him and offer my congratulations. But this—this oil, it has me baffled, I confess; it is a most horrifying thing, Count. What can you make of it?"

Donnaly had been carefully examining the lobby while Rudolf was speaking. He looked up and faced him squarely as he spoke.

"Why, the place is saturated with it," he exclaimed. "It has most undoubtedly been done on purpose."

"So I have almost concluded," replied the Duke.

"How did Your Highness learn of it?" asked Donnaly.

"Why, some—some of the men told me, I believe," replied the Duke carelessly.

"The King particularly instructed them that they spoke to no one about it," said Donnaly severely.

"He would scarcely include members of the royal family in that command," responded Rudolf haughtily.

The secretary remained silent.

After some further investigation and conversation the three men made their way to the château, and the rest of the day passed without incident.

Despite the King's command that nothing should be said regarding the supposed origin of the fire, the truth leaked out, and by the next morning every one was talking about it.

Amos was much annoyed, and sending for the fire chief and the men whom he had called upon to bear witness to the fact of the oil being there, demanded of them an explanation. All most emphatically denied divulging the secret. The Duke Rudolf, upon being asked, was unable to state just who had informed him, but was sure it was some of the many workers outside the palace.

Acting upon his secretary's advice, Amos invited Rudolf to lunch with him, and there, under the skilful questioning of Donnaly, all he knew, or at least all he cared to tell, was brought out. One grave discrepancy in his statement was apparent to both.

"I left the palace just after Domer Bell at five o'clock," said the Duke.

"At what time did Your Highness return?" inquired Donnaly.

"I did not return at all," replied Rudolf sharply. "I had intended to, but Count Cassell, with whom I was supping, pressed upon me to remain the night with him, and I acceded to his wish. We were both of us alarmed in the early morning by the outbreak of fire and hurried over to the palace. I had just arrived when Your Majesty so gallantly brought down the Queen."

"You will, my dear cousin, I am sure pardon all these questions," remarked the King with his most gracious smile, "but we all feel that we can arrive at any conclusion regarding this most horrible affair only by the closest examination of one and all who may have any connection with the palace. It is only by us all pulling together that we may hope to find the guilty one or ones. Do you not agree with me?"

"I most certainly do, Your Majesty," replied Rudolf, affably, "and you may rely on me to do all in my power to assist you. I would, however, respectfully suggest to Your Majesty that you conduct, so far as possible, this examination, if it may be so termed, yourself, since, with all proper respect to the gentleman who so ably occupies the position of secretary to you, it is somewhat galling to members of your family to be—what shall I call it?—cross-examined by a comparative stranger, and one who occupies a lower position in the royal household. Monsieur Donnaly will, I am sure, pardon these words of mine, and construe them in their proper meaning."

"I appreciate your words, my dear cousin, and will most certainly try, so far as possible, to respect your wishes, merely pointing out to you that I employ this gentleman to assist in this most difficult and delicate task solely on account of his greater legal ability, feeling sure that with his assistance we shall the sooner arrive at what we all most earnestly desire, the untying of this most complicated knot. You, mon cousine, I am certain, will pardon his bluntness in any questions he has asked, well knowing that he has our welfare at heart in all he does."

"Most certainly, most certainly," responded the Duke, and shortly afterward he took his departure.

For a short time the two Americans sat discussing his visit, then Amos said:

"Have him brought up now, Donnaly."

The secretary went to the door and spoke a few words to the guard outside. In a few minutes steps were heard advancing, and four soldiers conducted into the room the anarchist prisoner. He was handcuffed and wore leg irons.

"Remove the fetters and leave him here," commanded the King.

The guard unlocked the irons and withdrew.

"Now," said the King, "stand where you are, and say what you wish to."

The man commenced to stammer in broken French and Italian.

"Speak in English," said Amos. "I shall understand what you say. By the way," he added pleasantly, "you look in very good health now; better than when I last saw you. Outdoor exercise seems to agree with you. Proceed!"

The man cleared his throat, and began huskily:

"I sent that message because—"

"Say 'Your Majesty' when addressing the King," interrupted Donnaly severely.

The fellow commenced again:

"Your Majesty, I sent that message to you because I heard something while I lay in my cell the night before the fire, which I thought you ought to know—"

"Mr. Secretary, please take a pad and dot down all he says," commanded the King. "Proceed, prisoner!"

"At first I thought I wouldn't," continued the man, "but when I come to think it over, I decided as you had treated me white, after all, and as I might do you a good turn if I spoke up, so I asks to be brought up." He stopped and looked at the King and his companion.

"Go on," said Amos.

"I had come in out of your orchard, after a-working of those orange trees, and them chaps, contrary to your orders, had put bracelets on me, and I was a-thinking as they were treating me dirty, when I heard some whispering right close up against that barred window on the far end. At first I took no notice, thinking it was only some of the guard a-loafing around. Then I caught the words 'Je m'y connais aussi bien qui vous'" (I am as good a judge as you). They were speaking in French, and I know that language, you know. I kind of pricked up me ears, and then I heard the other chap say, 'Have your own way, then; tonight, if you say so.' Then I missed what was said for a time, but I heard 'feu,' 'fumer' and 'foret' (fire, smoke and wood). That got me interested, and I listened the harder. One said, quite loud like, 'She's at the château, I tell you; our chance may not come again for a time.' I crawled right close up against the window, and I could hear all that was said. They were going to fire the palace, Your Hon—I mean Your Majesty. Seemed like they wanted to catch you and your mate, I mean your secretary, and let Her Ladyship out. I heard it all. They had coal oil by the gallon stored right by me on the same floor. I tell you I sweated when I heard that!"

The man had lost all trace of his foreign accent now that he was speaking in dead earnest. He was talking straight, tough American.

"You are no Italian," said the King. "Tell me who you are and where you hail from?"

"I was born in Italy," said the fellow, "but I come away before I was ten, and for fifteen years I have been in the States knocking about different places."

"What's your name?"

"Davis is good enough to call me by, now."

"All right; go ahead."

[To be continued next issue]

When the Teacher Boarded 'Round

By Max Merryman

It is doubtful if the once common custom of the country or "deestrict" school teacher "boarding 'round" obtains now in many places in our country. We agree with the ancient tiller of the soil, who one day last summer said to the writer that the "deestrict school ain't what it used to was." The old order changeth in many things, and the country school is better to-day in many respects than it "used to was," although there is still room for improvement in some localities. Time was when the country teacher was incredibly illiterate—so illiterate that one teacher in a New England state sought to lessen the stooping position of his pupils when they were at their desks by telling them to "set up more erecter," and the writer well remembers how one of his early teachers in a rural school in the West was wont to tell pupils who had left the door ajar when they entered the room to "go back and shev that door shet." It was not uncommon for him to lapse into such errors in grammar as "I would of went" and "I ain't saw it." Indeed, he had a fine scorn of grammar, and discouraged the study of it in the school, but he was great on "readin', writin' an' spellin'," those three accomplishments being in his opinion the highest essentials in all education. He laid special emphasis on the value of "spellin'," and many were the "spelling down" contests we had in the old country schoolhouse on long winter evenings, when we pitted ourselves against some neighboring district school to see which should "spell down" the other. The vanquished school came in for much open derision, and the victorious ones went on their way with exasperating taunts in regard to the incapacity of the defeated school to spell. Important as "'rithmetic" was regarded we seldom got much beyond compound fractions, and we were wont to "figger out" some curious and complex problems not found in the school books of to-day. Physiology was thought to be a subject fit only for doctors to delve into, and when one progressive teacher in our district sought to introduce this study into the school he received a note from one patron of the school peremptorily forbidding his daughter to "ingage in fizzyology," on the ground that he did not think that it was polite for girls to "talk about their bones right before the boys," and the further objection was offered that only doctors had any right to know about people's "insides."

The teacher who "boarded 'round" had need of sound digestive organs, for there were places in which "sody biskits" and fat pork floating in its own clear gravy formed the chief diet, with dried-apple pie forming the "pièce de résistance." Pork appeared in some form at every meal, but it was made somewhat easier of digestion by plenty of "apple sass," while "apple butter" was a common and wholesome dish. This "apple butter" was once made in great quantities by the Shakers of New England, and one may still find it on Western tables. On special occasions some lad on the farm was given the task of "running down" one or two young chickens, that they might suffer the mercifully brief torture of having their necks wrung before they went into the skillet or frying pan to be fried a crisp and delicious brown, and there would be a rather thick flour gravy that was delicious when made by a housewife who understood just how to concoct this delicacy.

The teacher who "boarded 'round" was likely to meet with varying degrees of comfort, but real hospitality was not often lacking, however inconvenient it was to receive the teacher for a week, which was the usual length of time the teacher remained in each home. Sometimes the problem of where the teacher was to sleep became a serious one in families in which there were eight or nine children and but three or four beds. The writer has "boarded 'round," and he distinctly remembers that in one place two squirming boys of ten and twelve years were given the privilege of sharing his bed as a sort of reward of merit for being obedient to their mother, who said when bedtime came:

"I told Henny and Sammy that if they was real good they might sleep with the teacher."

Henny and Sammy were then bidden not to "wriggle around" all night, an admonition to which they paid but little heed. The space underneath the bed served as a sort of a storage bin for a quantity of apples, and Henny and Sammy consumed a number of those apples each night after they went to bed, and graciously and generously informed me that I could eat all I wanted to of them, and I availed myself of this privilege several times, as it was of no use to try to sleep until Henny and Sammy were through consuming their apples.

I recall that in one place at least I was allowed to choose between "long sweetnin'" and "short sweetnin'" for my coffee, the "long" variety being sorghum molasses and the "short" brown sugar. Sometimes I was asked to lend a hand doing the "chores," and I have chopped more than one cord of wood in the aggregate for the wood-boxes in the farmers' kitchens. Once I was kicked almost to "kingdom come" by a "cow with a crumpled horn." I was trying to milk, and my misfortune brought wild shouts of laughter from the farmer's two daughters, who were milking other of the cows in the herd. Sometimes there would be a "play party" arranged for my benefit, and nearly every game we played had some sort of a kissing penalty or reward connected with it, and the teacher was expected not to "show partiality" in distributing his kisses among the maidens present. We played "London Bridge" and "Three Jolly Sailor Boys" and "Grab." We marched around in a circle, with a maiden sitting in the center, and this maiden was supposed to be a certain "Sister Phoebe," and we sang as we marched:

"Oh, Sister Phoebe, how merry were we
The night we sat under Tom Snyder's peach tree!
Tom Snyder came out with his old rusty gun
And he said he would shoot us if we didn't run,
And if we didn't run, heigho, heigho!
If we didn't run, heigho!
Now take this hat on your head to keep your head warm,
And take a sweet kiss which will do you no harm,
But a great deal of good, I know, I know,
A great deal of good, I know."

Sometimes there would be a corn husking or an apple paring, and what mad flight and equally mad pursuit there was when a rosy-cheeked maiden found a red ear of corn! It was not uncommon for a farmer to kill eight or nine huge hogs for his own use in the early fall, and "the neighbors" would come in in the evening to assist in the making of sausage and trying out of the lard from the fat. Sometimes we sat around the big fireplaces or the kitchen stove and shelled corn for "hom'ny," for "hog and "hom'ny" were articles of diet sure to be found in many homes. Again a wheezy old melodion would be thrown open, and we would have a "sing" which was often a "babel of strange sounds." But the hilarity usually reached its height at the country dance, and I can hear to this day the "caller" bawling out:

"Sa-lute yer pardners!"

"Right hand to pardner and grand right and left!"

"Lady in the center and seven hands 'round!"

"Swing yer honey!"

"All dance!"

"Cheat or swing!"

"First lady to the right and gent follow after!"

"Ladies doe see doe!"

"Promenade all!"

"Ladies in the center and four hands 'round!"

"Swing yer ducksy-daddles!"

And so the dance went on and on until the wee small hours, when the dancers would set out for their homes in sleds and pungs and cutters, calling out all sorts of merry badinage, their voices coming back in snatches of song as they went over the hills or down into the valleys. "Boarding 'round" was not half bad, after all, and I do not know that I have been any happier in my years of city life, with all its more pretentious social functions, than I was when I enjoyed the social pleasures of a country school teacher who "boarded 'round" among people who were at least genuine in their hospitality and warm and true in their friendship for me and for each other.

The Heart's Refuge

BY EUGENE C. DOLSON

Thoughtless frivolities can but impress
A steadfast life as vain and valueless,
Whose feet for happiness would never roam
Beyond the guiding light that welcomes home—
Who finds, from pleasure's giddy whirl apart,
His dearest joy—the love of one true heart.

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Common Sense and Common Remedies

BY HILDA RICHMOND

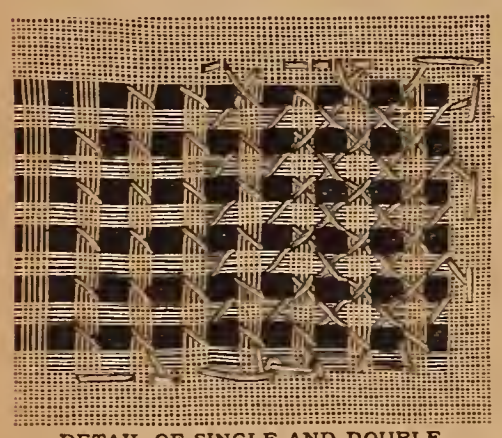
Water

"You bathe your body outside, madam, but how about inside?" asked a doctor when a patient told him she could not remember when she took a drink of the life-giving fluid. "Why, you wouldn't think of taking a bath in coffee or tea, yet you wash out your whole alimentary canal, or try to, with such fluids."

It is usually the people who never take exercise who do not drink water, for no one can ride or row or walk without drinking quantities of water. It is even more necessary to bathe the inside of the body than the outer surface, since Nature has provided perspiration for the partial cleansing of the body, and friction of clothing will do much toward keeping the skin clean, while the inside must depend upon what is poured into it through the mouth.

It is too bad more people do not appreciate water for its healing properties. To be sure, rich people rush hither and thither from this water cure to that in search of the fountain of youth, but as far as knowing that the fountain of youth, as youth of body and vigor goes, is right at home, very few realize that fact. We must all grow old, but we can do so in a happy, healthy manner if we only take advantage of the common remedies.

A lady who was afflicted with sleeplessness, and who could not go out for exercise because of a sprained limb, was visited by a trained nurse. Without saying a word, she gave the patient a hot



DETAIL OF SINGLE AND DOUBLE AJOUR STITCH

bath, rubbing her until her skin glowed with warmth and then tucked her into bed. As a result she slept soundly, and thereafter knew what to do at night to ensure a good rest. Fretful children when bathed and rubbed at bedtime will sleep all night in a way to surprise their parents, and invalids are greatly benefited by the use of hot applications. The old idea that sick people should not be disturbed by being bathed has almost disappeared, but occasionally one is found who clings to it.

For cleansing the internal organs nothing takes the place of pure water. The first thing in the morning after rinsing the mouth and cleaning the teeth should be a pint of pure, cool water, and the last thing at night should be plenty of this life-giving fluid. For nervousness doctors recommend it in large quantities, and there are cases on record where patients have been suffering needlessly for years all because they would not drink water. The nerves are especially diseased if water drinking is neglected, and when the nerves are gone, all is gone.

There would be fewer colds if people drank water constantly. Almost every time a cold is taken it will be found that the system was clogged with waste matter. Systematic water drinking would prevent this and keep the body in such condition that colds would be unknown. In fevers water internally and externally must be used, though the old idea was to deprive the patient of it, for fear of harm.

For all wounds and bruises hot water cleanses and brings relief. The old fashion of putting on dusty cobwebs or sugar or soot to stop the flow of blood still prevails among ignorant people, but the majority of men and women are better informed. The first thing in an injury is to thoroughly cleanse the wound with water that has been boiled and cooled. For touching broken skin of any description where blood poison is likely to set in, the water should always be boiled before being used. It is needless to say that it should be used in a clean vessel by clean hands to avoid all trouble.

Where the skin is not broken it need not be boiled, though hot water is very soothing to all bruises and sprains.

In headaches, colds and slight sicknesses hot foot baths will do wonders. Get the patient into a loose dress or gown and then immerse the feet far above the ankles in a pail of hot water. At first the water cannot be hot enough, but more may be added from time to time, until the feet fairly glow. This draws the blood to the extremities and induces sound sleep, which finishes the cure. For colds, the hot foot bath starts perspiration, and then the patient may be snugly wrapped up in bed to sweat out the trouble. It is surprising how the skin throws off waste matter if only the pores are kept open by frequent bathing and the alimentary canal flushed out very often with water.

PINE CONES IN AJOUR EMBROIDERY

Especially in winter should attention be given to drinking water and bathing. In summer the perspiration and exercise help cleanse the skin, but in winter the tendency is to shrink from water inside or out. By taking a bath in a warm room, and then going straight to bed, there is no more danger than in bathing in summer time, and it is more necessary to wash out the internal organs in cold weather than in warm, since the heavy foods of winter need it more than the watery ones of summer to help them out of the system.

Be sure your supply of drinking water is pure, and then use plenty of it. Nothing will ever take its place, and even if it doesn't cost anything, it is valuable. Get yourself in good trim by having a housecleaning inside and out, and then stay clean. It will pay in dollars, and particularly in enjoyment, because it will keep your body in good condition which is a priceless luxury.

[THE NEXT SUBJECT THAT WILL BE DISCUSSED IN THIS SERIES WILL BE "REST"]

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Ajour Embroidery

BY MAE Y. MAHAFFY

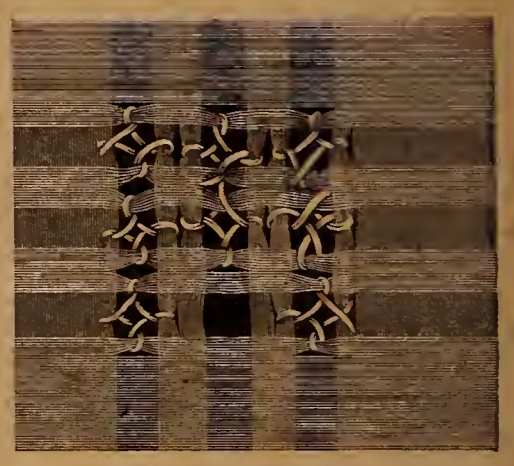
There has been a marked tendency of late among needlecrafters to carry out drawn work features in unusual methods. Instead of confining this work to straight lines, we now make up circular or oval pieces without hesitancy, and have for some time been working out the irregular motifs which go to make up a design in this same old attractive stitch work. To be sure, we utilize finer patterns for small details than are usually favored in the well-known Mexican work, yet those who are familiar with any one species of drawn work will find but little difficulty in mastering the others.

Drawn-thread work is one of the oldest known forms of ornamental needlework, and has passed through varying stages, but in all these changes no more delightful results have been obtained than are possible with Ajour, or Toledo, embroidery. This, like so many lovely styles of needlework, comes from the nimble fingers of the peasantry of southern Germany and the adjoining countries. It is, in reality, a combination of drawn work and solid embroidery, and is exceedingly beautiful when artistically carried out.

It is suitable for such varied purposes, and is of such splendid wearing qualities that any one will be amply repaid for investigating it thoroughly. Any material from which threads may be withdrawn is suitable for this work, whether it be linen, canvas, muslin or bolting cloth. One needs only to choose a fabric which will be satisfactory for the usage it is to receive, and a working thread which will be in harmony. The largest number of really handsome pieces in this country are done on fine, round thread linen with lace thread and luster cotton, and these materials wisely selected could scarcely be improved upon.

The designs are not unusual ones, almost any floral or conventional pattern being adapted to Ajour. The drawn work occurs within, or goes to make up the separate motifs, not to surround them, as in some styles of drawn work. The scarf illustrated shows what is meant by this, the pine cones themselves being of the Ajour work. The remainder of the design is embroidered, the stems solid over padding, and the needles outlined. This embroidery is in the soft luster cotton. Grape leaves, chestnut branches, wild roses, clematis, lilies and pansies make up especially charming patterns for this work, the smaller details being worked out in satin stitch, outlining, etc. The edge of the figure to be drawn is also worked around with padded satin stitch or in close buttonholing. The parts to be filled with Ajour are first drawn into tiny blocks, as appears in the upper part of the accompanying sampler. This is accomplished by drawing from three to six threads, according to the quality of the background fabric, then skipping a like number, alternately, all the way across the figure in both directions. The finer the material used and the fewer threads drawn, the daintier will the finished work appear. In cutting the ends of the threads to be pulled out of the fabric, be sure to cut close inside the embroidered outline of the design, so that its contour will not be marred. Sharply pointed scissors will be a great help in this work.

The lace thread, which should be of hard quality, and which may, if necessity arises, be replaced by ordinary thread of a weight which corresponds to the threads in the weave of the background fabric, is now brought into play in the binding of the threads left between the drawn spaces. In doing this part of the work, fasten all threads on the wrong side in the embroidery which forms the edge of the figure. If this is neatly done, the wrong side of the work will present almost as neat an appearance as the right.



AN EASY AND POPULAR STITCH

Beginning at one edge, preferably with a blunt-pointed needle, to avoid piercing the fabric threads, carry the working thread under each group of threads between the solid blocks of linen and over these. This is illustrated in the sampler in a couple of rows adjoining the unworked drawn space. After all the rows are bound in this way across the figure, turn the work and bind the rows running at right angles. This makes little crosses on each plain linen square, and appears in the next rows of the sampler. This completes the genuine Ajour stitch, and in many articles it is the only stitch used. It forms the real background, as a rule, even where additional work is included.

The remaining rows of the sampler show the double Ajour, or "La Croix" stitch, as it is called. It is simply the binding of all rows first from one way and then from the other in both directions. This makes a double cross on the linen blocks instead of the single one in plain Ajour.

Other stitches are frequently used, such as the little twisted cross, which has been used since the days of the old Saracenic workers, whose drawn-thread pieces are so carefully treasured in museums and needlework collections. This is shown also in a separate sampler, and may be used with or without the Ajour stitch. It consists of carrying the thread from side to side of the open block, throwing it under the point of the needle each time as in buttonholing. Simple patterns used by the makers of drawn work in evenly spaced blocks are all appropriate for this class of embroidery, and the variety of stitches which may be utilized is limited only by the ingenuity of the worker.

In the scarf the Ajour of the pine cones is treated to groups of three woven blocks, alternating, in the various rows. Four may be used around one open block with good effect. And frequently these

Seed Time for the Woman of the House

BY LAURA JONES

We have the Divine promise that "while the earth remaineth, seed time and harvest shall not cease," and in the floral kingdom seed time for many of our prettiest flowers must begin in the late winter in the house if we would have any display during the flowering season.

Many flower lovers cannot afford to buy a start of the plants, therefore by a little work, patience and intelligent care, a start of many of the expensive greenhouse plants can be gotten from seed at a very little expense. One must have a suitable place for the seed, where they will not be disturbed and where they will receive a uniform temperature. A south kitchen window is usually the best place, as there is nearly always an even temperature there, and if the seed boxes are placed where one can see them, they will not likely be neglected, as they would be if out of sight. Use a rich soil that is one third sand, sift at least the part that is near the top of box, and cover the seed with sifted soil. Cover to a depth proportionate to the size of seed is the rule.

The tin tomato can makes an excellent receptacle for starting seed. The porous pots dry out too quickly for this purpose. Cover the cans tightly with glass, and never bring the soil to the tops of the cans, as the seed wash out if too near the top; moisten the soil good and keep it moist; never neglect them, and above all, keep them in the sunlight. I have used an east window in the morning, and changed the table to a west one in the evening. I prefer a window to a pit, as they receive more attention there.

Seed of dahlia germinate quickly in about five days, and most of the plants will be double. Cosmos must be started early in February or March; so must canna, verbena, salvia, pansies, moonflower and sweet alyssum; start plenty of seed for individual beds, and allow a little over what is needed for failures. One will want great quantities of the alyssum for edging the beds, and plants of the Kennelworth ivy will come in good place for dainty green hanging baskets.

Now as to the greenhouse seed. We can grow almost any of them in the ordinary window, with care and patience; it takes from a month to six weeks for some seed to germinate. I have grown a number of the smilax from seed, also carnations, chrysanthemums, cyclamen, and excellent plants for hanging baskets and for greenery cutting the asparagus in variety. All who have seen a well-grown plant of the Australian silk oak, or the Grevillea Robusta, will want one, and this can be grown from seed, but it will grow slowly until it gets a good start, but when well grown is as pretty and as decorative as any palm, and can be pinched into a beautiful shrubby shape.

A person often gets a start of new varieties of the chrysanthemum from seed, and one cannot have too many of these autumn beauties, but they must be started early to bloom the first season.

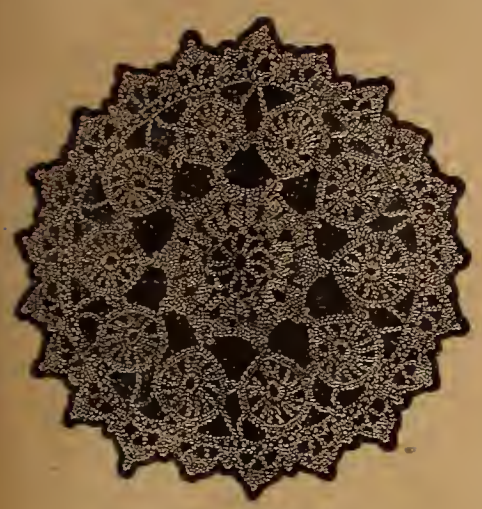
One will want ornamental vines about the home, both for shade and for the attractiveness of the home. Many unsightly objects can be made into things of beauty by draping with these vines. The moonflower, Japanese morning glory and Cobæa Scandens are all rapidly growing vines, and all require an early start in the house. The moonflower seed is very hard, and must be soaked or filed before planting.

Seed boxes need constant attention, the soil must not be chilled and must be kept constantly moist, but never wet, or the seed will rot.

blocks of weaving are placed in rows to simulate midribs of leaves, veins, etc.

In doing drawn work of this character the material should be stretched taut in hoops, or basted smoothly over enamel cloth, so that one stitch will not be drawn tighter than the others. All must lay flat and snug, for puckering is sure to ruin the finished appearance of the article.

Several varieties of stitches may be used in one design, and if they are arranged with thought and care the effect is quite like shading. The heavier stitches should be used in such parts of the design as would be carried out in the darker shades of colored embroidery, and the more open work left for the lighter points. It is wonderful what a difference is obtained by following out some



DOILY IN CROCHET

such well-planned scheme of work, and it adds greatly to the interest as well.

Centerpieces, doilies, fancy articles of all kinds, sideboard or dresser covers, collars, cuffs, shirt waists, etc., are all suitably embellished with this exquisite needlework. And colors may be utilized in sofa pillows, curtains or other articles when they are preferred.

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Handsome Doily in Crochet

BY MRS. J. R. MACKINTOSH

Chain 10 stitches and join to form a ring.

First row—Ch 9 (four of these stitches stand for the first long treble), 1 long tr (wind thread twice over hook) in ring, * 4 ch, 1 long tr in ring, repeat from * seven times, 4 ch, fasten with a s c in fifth st of ch 9. There must be ten long tr and ten spaces in ring.

Second row—Slip st into next st, then make 2 d c, loop these over the ch 4, * ch 5, then 2 d c looped over next ch 4, repeat from * around, ch 5, fasten with a s c on first d c of this row. Ten spaces.

Third row—Slip st into 2 st, ch 4 (for first long tr), 2 long tr, ch 5, 3 long tr, all in ch 5. * 3 long tr, ch 5, 3 long tr in next ch 5, make no ch between the first long tr in each space and the last in preceding space repeat from * around, fasten last tr to first one made in this row.

Fourth row—In this row the small wheels are worked. Slip st onto second long tr, ch 4 (for long tr)—make it directly on the second long tr—a long tr on next long tr, * then work 3 long tr in ch 5, ch 4, fasten in top of long tr just made, for picot, ch 17, pass over the last seven of these slip st into next 5, then taking the ring formed by the 7 ch, work into it ** ch 2, 1 double long tr (thread three times over hook), repeat from ** fourteen times, ch 2, fasten with s c in st of ch 5, still left on the 17 ch of last row, the 5 slipped st along the ch, imitate a double long tr, so that the wheel appears to be formed of sixteen of these st. Now slip into 2 st of the ch 4 left of ch 17, and d c around the wheel, 2 into each space and 1 on each long tr, then join. Ch 2, make a s c in the st in which picot was made, ch 4, fasten in same place 3 long tr in same space as the first 3 long were worked, 2 long tr over the next 2 long, and missing the 2 united center long tr of preceding row, work 2 long over the next 2 long. The two center st of this group of 10 long are joined together like the center st of last row. Repeat from * until you have ten wheels. The wheels are joined together by two picots. In working the second wheel, when you arrive at the st on the fourth double long ch 6, turn back and catch in fifth st for picot, ch 1, join to corresponding st in first wheel, ch 6, catch in fifth st for picot, ch 1, and complete the wheel.

Fifth row—Fasten thread on the eighth double long, ch 6, * 1 d c over next double long, ch 3, a tr (thread once over hook) over next double long, ch 8, now work a st with the thread twisted four times over hook in the next but one double long. Another of these extra long st over the first double long after the joining picot of the following wheel. The two extra long st are worked together, ch 8, a tr over the next but one double long of the wheel, ch 3, repeat from * around.

Sixth row—A tr, ch 1, in every other st of row. If these spaces are divisible by six the scallop will come out even.

Seventh row—A tr in first space, * tr in each of the next 4 st, this brings the fifth tr into next space, ch 3, miss 1 space, 1 long tr, ch 4, 1 long tr in next space, ch 3, miss 1 space, 1 tr in next space, repeat from *.

Eighth row—* a d c in the center tr of the 5 tr, ch 4, fasten in d c for picot, ch 2, d c looped in ch 3, ch 2, 3 tr under ch 4, make a picot on third tr, 2 tr in same ch 4, ch 2, a d c in ch 3, ch 2, repeat from *.

This doily can be worked with spool cotton or of silk. For serviceable purposes on the wash stand crochet cotton would be appropriate. The illustrated model is made in san silk, and measures eight inches across.

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For the Hands

BY MARY FOSTER SNIDER

The woman who must do her own housework is apt to find her hands becoming rough and reddened unless she takes exceptionally good care of them, and as in this state they are decidedly unattractive, as well as uncomfortable and annoying, it is well to bear in mind that prevention is better than a cure.

Very hot water and very cold water must alike be avoided, and one should never venture out in the cold with the hands uncovered. Loose gloves should be worn when performing every task liable to discolor or roughen the skin, and if the hands have become very sore and red it is wise to anoint them generously before retiring with a soothing cold cream or camphor ice, and wear loose kid gloves for two or three nights or until they regain their normal condition.

The most tender place of all seems to be the outside of the hands and wrists, and this is largely due to the fact that one is less apt to dry them as carefully there as elsewhere. Great care should be observed to dry the hands thoroughly each time after they have been in water, keeping a soft linen towel for this purpose. A saucer of cornmeal or oatmeal kept on the sink or lavatory is a valuable toilet adjunct; a little of it rubbed well into the hands each time after drying them will assist very materially in keeping them soft, smooth and white.

A very soothing, bleaching and delightful remedy for red or chapped hands may be made as follows:

Melt together over hot water three drams of spermaceti, four drams of white wax and one ounce of almond oil. When liquid, mix thoroughly with a small wooden or silver spoon, and drop in by degrees, while mixing, three drams of spirits of camphor. Continue stirring until the mixture begins to cool, then turn into little pots, having it only deep enough to make convenient-sized cakes for using. When cold and hard turn out and wrap in tin foil, or it may be kept covered in the little pots, if preferred. Rub it well into the hands each time after washing and drying them, continuing to rub until the skin will absorb no more. For cold sores and chapped lips it is equally efficacious.

This cheap and easily prepared toilet cream is equal to most of the high-priced preparations sold for this purpose, and indeed superior to a number of those highly lauded for keeping the hands beautiful.

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Pointers Worth While

Ground ginger used for plasters instead of mustard is just as good to "draw," and it never blisters.

To prevent blue spotting the clothes, put some out on a piece of white cloth, gather up the corners and tie together. Dip this bag in the water, and squeeze it until the water is blue enough. In this way the clothes will never become spotted.

A few drops of cider vinegar rubbed into the hands after washing clothes will keep them smooth, and take away the spongy feeling they always have after being in water for a good while.

Never use soap in washing silk stockings. Bran in water is the proper fluid to use—four tablespoonfuls to one quart of water. Rinse in several clear waters, pressing the water out. Dry stockings in the sun.

Soap improves with keeping, and it will be found economical to purchase it in large quantities. Before storing it, however, the bars should be cut into pieces of convenient size, for this is easily done when the soap is soft and new, but not when it has become dry and hard. The easier plan is to cut it with a piece of wire or a bit of twine in the same way as grocers cut cheese.

Have you ever thought what a wonderful medical preparation plain hot water is? Drink a glass of it every night if you want a good digestion, a good sleep and a clear complexion. Put a bag of it to your feet when you have a cold, to your back when you have a backache, or at the nape of your neck when you have a headache or feel sleepless. Soak the feet in it when they are tired. Soak the hands in it before manicuring.

Useful measures in checking hemorrhage of the nose are: Reaching both hands high over the head; bathing the face with very hot water; placing bits of ice in the nostrils; rubbing ice on the back of the neck, and compressing the nose frequently between the thumb and finger for several minutes. Care should be taken to hold the head erect. Bathing the face with cold water, while bending the head forward over a wash basin often increases the bleeding.

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Soups Without Meat

Vegetable soups, served piping hot, will be welcome additions to the winter bill of fare, especially to those observing fast days.

Baked Bean Soup will utilize a remnant of cold baked beans. Put into a sauce pan three cupfuls of baked beans, three pints of water, two slices of onion, two stalks of celery cut into inch pieces, one and one half cupfuls of canned tomatoes. Simmer for thirty minutes, then press through a purée sieve. Add two tablespoonfuls of flour blended with two tablespoonfuls of butter, one level teaspoonful of salt and one fourth of a teaspoonful of pepper.

Corn and Tomato—Heat two tablespoonfuls of butter in a sauce pan, put into it two finely cut onions, one bay leaf and six whole black peppers; cook five minutes without browning; add one tablespoonful of flour; stir, and cook two minutes; then add one quart of tomatoes, cut up or canned, one tablespoonful of sugar, one teaspoonful of white pepper; stir often, and cook ten minutes. Next comes one pint of boiling water; cook five minutes, rub the tomatoes through a sieve into a clean sauce pan, and add a pint of corn cut from the cob or canned; put it into the soup, and boil fifteen minutes; mix the yolks of two eggs with one half cupful of cream or milk, stir into the soup, and serve at once.

Pink Velvet Soup—Half a canful of tomatoes, one pint of water, one tablespoonful of butter, one large onion chopped small, one potato shaved thin, one saltspoonful of celery seed, one teaspoonful of salt, one tablespoonful of sugar, and a pinch of sweet marjoram. Boil together for thirty minutes, or until the potatoes melt. Strain, thicken with granulated tapioca or corn starch, boil five minutes, add a pinch of baking soda, and then pour in a pint of hot milk. Serve at once.

Almond and Celery Soup—Cut in small pieces a bunch of celery, using the leaves and carefully scraped root; add six peppercorns, two bay leaves, one tablespoonful of onion juice, a thin slice of lemon, one teaspoonful of salt and a stick of cinnamon; cover with one quart of water, and cook an hour; strain, and reheat, stirring in one cupful of rich milk (cream is better), one teaspoonful each of flour and butter blended together, and one fourth of a cupful of blanched almonds that have been pounded to a paste, allowing soup to boil for a moment or two after the nuts are added. Serve very hot with cheese crackers.

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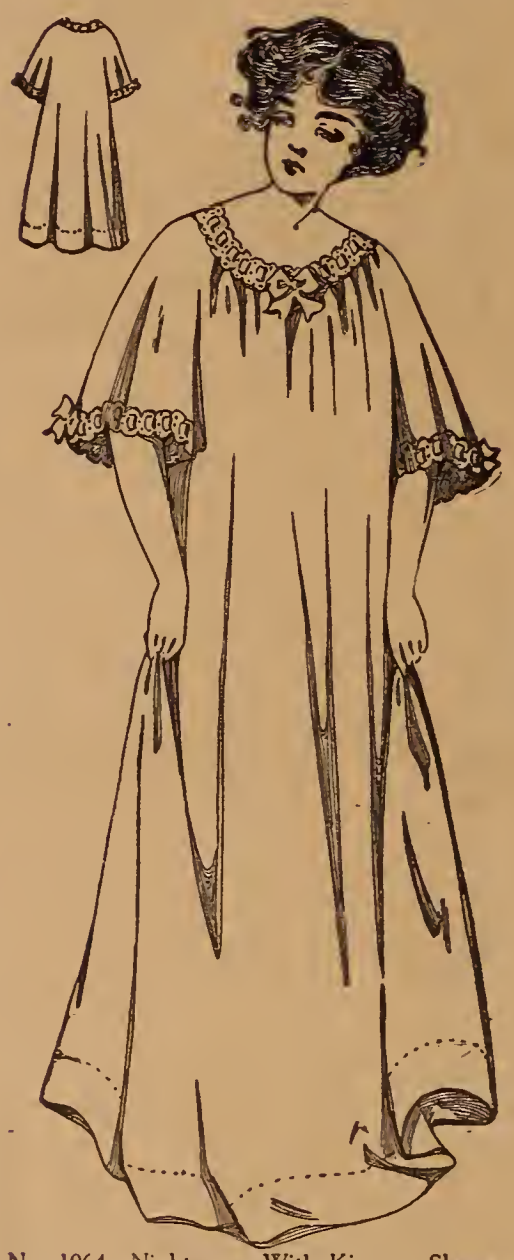

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Here is a sensible sewing apron made with novel and very big pockets. This apron should be made of some durable material, such as a good quality of soft-finish linen.

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Fashionable small girls these days are wearing quaint little Empire coats. They are generally made of white broadcloth, with a deep yoke a mass of white silk braiding. The little model here pictured will also look well developed in gray or tan cloth, with the braiding white or in self color.

No. 574—Princess Apron

This prettily shaped princess apron will be found quite an addition to one's afternoon dress. It can be made of lawn or pongee, with a dainty little edging of lace.

No. 964—Girl's Underwaist and Drawers
Sizes 6, 8 and 10 years

No. 1018—Child's Dress With Drop Yoke
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Our pattern catalogue is a big, illustrated fashion magazine in itself. It contains designs for Miss Gould's latest Paris and London fashions, and page after page of simple practical designs. It tells how to dress the baby, what style of clothes to make for your young daughter, and gives you many helpful hints about your own wardrobe, too. We will send it to you for four cents in stamps. Address: Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

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No. 1067—Misses' Yoke Nightgown
Pattern cut for 12, 14 and 16 year sizes

Miss Gould's Fashion Page

No. 947—Box-Plaited Shirt Waist With Revers

Sizes 34, 36, 38 and 40 inch bust measures

WHEN Paris fashions are designed, the woman who is forced to study economy is not always considered. But the news that the overskirt is back in vogue again, and that what the French call tunic skirts will be high style in America all through the spring and summer, should come as really good news to the woman who wishes to be stylish, but, alas! has little money to spend on her clothes.

The skirt with the tunic drapery lends itself admirably to the making-over process, and then, too, it is possible to use material from two old gowns in making the new one, as many of the imported models in tunic skirts show the foundation skirt and the overdrapery in different fabrics.

The very new skirt illustrated on this page is made with a narrow front gore, wide circular sides and a narrow back gore. The side gores of the skirt are faced up with velvet, and then the fabric draped to give the overskirt effect. It is not at all necessary to use velvet for the lower part of the skirt, as any material which will harmonize with the overdrapery may take its place just as well.

The pattern for the waist worn with this skirt provides also for a separate guimpe. The overblouse is trimmed to simulate a large armhole, and is slashed in front to show the guimpe underneath. If you happen to have a lace or a net waist which is not as good looking as it used to be, you can easily make it over into a guimpe to wear with this overblouse.

No. 1055
No. 1056

No. 1055—Slashed Overblouse With Guimpe

Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, three and one half yards of thirty-six-inch material, or two and one half yards of forty-four-inch material, with three fourths of a yard of velvet and three and one half yards of net for the guimpe.

No. 1056—Skirt With Overskirt Drapery

Pattern cut for 22, 24, 26 and 28 inch waist measures. Length of skirt in front, 42 inches. Quantity of material required for medium size, or 26 inch waist, five yards of thirty-six-inch material, or three and three fourths yards of forty-four-inch material, with two yards of velvet for trimming.

No. 893—Yoke Dress for Boy or Girl

Sizes 2 and 4 years

IT is no longer necessary to have the hat match the costume. In fact, the very newest idea is just the opposite. Black hats are extremely fashionable worn with any costume. The first imported hats for early spring wear show smaller shapes than have been worn throughout the winter.

One-piece dresses will be much in favor this spring. Many of them will show a smart tailored effect. These costumes are cut out at the neck to show the guimpe, and are generally made with half sleeves or with no sleeves at all, while the guimpe has the seven-eighths or the long sleeve.

Purple in combination with green and pinkish violet with cerise are two of the latest color ideas from Paris. A shade of yellow known as mustard is also much the fashion. It is pleasing, however, to know that a good staple color like dark blue is also approved by the French fashion makers.

It is quite a fad nowadays to have one's hat pin and belt buckle both made of beads and to have them match. Bead bags and bead purses grow more and more fashionable, and beaded trimmings are also the mode.

Miss Gould will be glad to send a personal letter to any subscriber of Farm and Fireside who wishes to know where the extension elastic belt and the darning machine illustrated on this page may be purchased. Send letter, enclosing a stamped and self-addressed envelope, to Miss Gould, care Farm and Fireside. 11 East 24th Street, New York City

No. 681—Baby Sacques

Cut for one size only

MAKING shirt waists is an easier matter than it used to be. For five cents nowadays a woman can buy a ready-made neckband to finish her shirt waist—one with three buttonholes. She can also get a ready-made buttonhole tape to use for the false fly in a shirt waist. It comes made of lawn—a fine strip doubled, with buttonholes worked in it. These strips cost but ten cents a yard.

The Extension Elastic Belt for Holding the Shirt Waist Down

THIS elastic extension belt for holding the shirt waist down is particularly serviceable, as it has a nickel slide, so that it can be easily made larger or smaller. In cotton elastic it costs 14 cents, and in silk, 24 cents.

No. 982—Short Cape

Sizes 32, 36 and 40 inch bust measures (small, medium, large)

THERE are any number of occasions when a separate short cape like the one shown in the illustration is a most convenient little wrap to own. It is easy to make, too, and has a trim look at the back, as it is fitted in with darts. Velveteen is a good material to use for this cape, or broadcloth, or, if one so wishes, it can be made of the same material as the skirt, and thus form a suit, letting the cape act as a substitute for the jacket. For trimming, use either soutache braid or a narrow band of velvet.

HERE'S good news for the mother of small boys. It's a darning machine which will put a new heel or toe in a stocking in quick order, and will save the good mother's eyes and prevent her patience from being tried. It works like a loom and it mends all fabrics both sides alike. It will darn any size hole, from half an inch to a two-inch one, and any kind or size of thread can be used, from the finest silk down to the coarsest wool yarn.

A Novel Little Machine for Darning Stockings and Fabrics

To repair the stocking or fabric, the stretcher must be placed under the hole and the warp holder, or saddle, as it is called, placed over it, thus stretching the fabric tightly and holding it firmly in position. The hole must then be trimmed square. Careful directions in detail are furnished with each darning machine, showing every step in the making of the darn. It must be remembered, however, that the darner is not a toy, but is a real scientifically adjusted machine, and to get the right results the directions for its use must be carefully followed. This darner costs but 25 cents.

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Clarence Gray, Pennsylvania.

Remember, this Pony Contest closes March 1st. Get in your good work before then. Don't lose a minute! Yours for success,

THE PONY MAN.

The Department for Our Young People

What Grandpa Saw at Our House

BY W. C. KENTON

"You must be careful not to leave your playthings on the floor, children," said Mrs. Tyner. "Grandpa is coming to visit us, and he cannot see very well. If he should stumble over a ball or a book he might fall and get hurt."

"I guess we'd better not play with them while he is here," said Violet. "We might forget."

"I'll put mine all away in the playroom," said Edwin. "It must be dreadful not to be able to see things. Why doesn't grandpa wear spectacles?"

"He does," said Mrs. Tyner, "but still there are many things he does not notice. I am so glad you are going to put everything in the playroom, for then I will not have to worry."

The children had never seen Grandpa Tyner, so they talked a great deal about him during the next few days. They wondered if some one would have to lead him around as they did Mrs. Fields, who was nearly blind, or whether he would dislike to have any one think he could not see. Mrs. Packer next door was always getting into trouble because she could not see well, and yet she would not allow any one to do anything for her.

"I have broken my glasses," said Grandpa Tyner before he got out of the carriage. "I can see fairly well with them, but I miss them a great deal." His son led him into the house, and they all had a good time together that afternoon. Violet and Edwin sat listening eagerly, until time to do their evening chores, of the pioneer days when grandpa was a young man clearing the land and helping to make roads through the forests.

"I'm going to hurry with my kindling as fast as possible," said Edwin to Violet in the kitchen. "I want to hear more about the log rolling and the hunting."

"And I'm going to set the table as fast as anything," whispered back Violet. "There! Grandpa is saying something about us."

Sure enough! "You have very nice children, John," grandpa was saying to their father. "I noticed that the cat and dog seemed very friendly with them this afternoon. It is always a bad sign when pets run from children, for it shows they are not kind to them. And when Mary asked them to do their chores, they went without grumbling. They didn't say much, but I know they are bright, modest, happy little folks from the way they behaved."

"If he can see all that without his spectacles, what could he do with them on?" whispered Edwin in surprise. "I'm glad he thinks we are all right, aren't you?"

"Indeed I am," said Violet. "I suppose he could see our faults just as quick. I don't see why mama thinks he cannot see well. We'll have to be very careful or he'll see all the good and bad before he goes home. I think his eyes are very, very sharp, and I hope he won't see either of us do anything naughty."

The Age of Animals

Most of our boys and girls are fond of animals, many have pets of their own that they care for daily, so that Alonzo Rice's little chat on the relative ages of different animals will very likely find much interest among our young friends:

"A bear rarely lives to be over twenty years old. A dog lives twenty years; a wolf, twenty; a fox, fourteen or fifteen. Lions are long lived; one has been known to live to the age of seventy years. A squirrel or hare lives seven or eight years; rabbits, seven. Elephants have been known to live to the great age of four hundred years. When Alexander the Great had conquered Phorus, King of India, he took a great elephant, which had fought valiantly for the king, and named him Ajax, dedicated him to the sun, and let him go with this inscription, "Alexander, the son of Jupiter, hath dedicated Ajax to the sun." This elephant was found with this inscription three hundred and fifty years afterward. Pigs have been known to live to the age of thirty years; the rhinoceros to twenty. A horse has been known to live to the age of sixty-two years, but averages from twenty to thirty. Camels sometimes live to the age of one hundred years. Stags are long lived. Sheep seldom exceed the age of ten years. Cows live about fifteen years. Cuvier considers it probable that whales sometimes live one thousand years. A swan has attained the age of two hundred years. Pelicans are long lived. A tortoise has been known to live to the age of one hundred and seven years. Insects, as a general rule, are short lived, though there are a good many exceptions to the rule. Franklin has a very interesting little story about a kind of fly, called an ephemera, whose successive generations are bred and expired within the day!"

KATE SANBORN'S INDIAN TEPEE

Kate Sanborn's Indian Tepee

BY E. J. FARRINGTON

Miss Kate Sanborn, who wrote that famous book called "Adopting an Abandoned Farm," is an enthusiastic, if not altogether practical, farmer herself. She has a large farm at Metcalf, Massachusetts, not many miles from Boston, which is known as "Breezy Meadows," and there she spends much of her time. At various times she has been interested in dairying, poultry culture and the growing of money crops. She has a fad for unique summer houses, a number of which are scattered about the farm. One of them is in the form of an old-fashioned log cabin with a big fireplace, but perhaps the most unique is the Indian tepee shown in the accompanying illustration. It is built of poles and bark and is an interesting reproduction of one of the primitive dwellings of the aborigines. Several artificial figures representing Indians are scattered about the grounds in the vicinity of the tepee, to complete the picture.

"I AM THE COAL MAN" Photo by Will G. Helwig

The Clever Elephant

FROM THE GERMAN BY ELMA IONA LOCKE

An Englishman of rank, living in India, had guests to dinner one day. He dwelt outside the city, in a beautiful country house which was surrounded by tall shade trees.

In such a hot country fresh air is one of the greatest of necessities, therefore the door of the dining hall, which led into the garden, usually stood wide open.

Now, the gentleman possessed a young elephant that was very tame and that gave his children much pleasure.

Each time they were at table the animal would come into the room through the open door and place himself behind the children's chairs. When they received a banana or other fruit he would reach over with his trunk, take the fruit, put it into his own mouth, and eat it. This delighted the children, and they gave him more.

But there was invited on this day a young cadet from the city. He sat near the children, and the elephant attempted to take some fruit from his plate. The cadet, however, pricked the elephant's trunk with a fork. The animal drew back his trunk and went out of doors.

The children were grieved to have any one hurt their pet so. But suddenly he appeared again, carrying in his trunk a small shrub that he had pulled out of the ground by the roots.

The shrub had been growing out of an ant hill, and the roots and adhering earth were covered with these small insects, which, however, can bite very painfully.

The elephant went up behind the cadet and shook the ants onto his head. They of course crawled all over his face and neck, and bit him so that he would have cried out if he had not been in company. But he was obliged to take in silence the joke which the animal had played upon him, for it had only paid him back in his own coin.

Working a Good Thing

"When you stepped upon that gentleman's foot, Tommy, I hope you apologized."

"Oh, yes; indeed I did," said Tommy, "and he gave me ten cents for being such a good boy."

"Did he? And what did you do then?"

"Stepped on the other and apologized but it didn't work."—From the American Boy.

THE PUZZLER

Below we print a number of old-time riddles, some of which may be new to you, others that you have heard and forgotten, and still others that you remember. The answers will be printed in the next issue.

We should like our friends who are interested in this department, to send any similar riddles with answers attached, for our possible use. We want you to have a personal interest in The Puzzler as well as the whole Young People's Department, and to this end we hope to make it of such value to you that you will not want to miss a single issue.

Can you solve the following:

What is generally black and white and red all over?

Why is a fashionable lady said to be like a locomotive?

When does a man represent a cooper's bench?

Why are coal miners often likened unto moles?

When is a day like your oft-used old hoe?

As I crossed the London bridge I met a London scholar, who tipped his hat and drew his cane, now I have told you the name of the London scholar.

What particular bone of the fowl is like a great French general?

The answers to riddles printed in the January 10th issue follow:

1—Friday. 2—Holes. 3—Puts down three and carries one. 4—A bald head. 5—Because the engine cannot play upon it. 6—The pig—killed first and cured afterward. 7—An egg. 8—Smoke. 9—Wheeling, West Virginia. 10—Because it is the "scenter." 11—Thrashing machine. 12—Lansing, Michigan. 13—Because it is dog on ice ("doggone" nice). 14—Broom. 15—Well.

Stories from Our Boys and Girls

We are anxious that our boys and girls shall have the greatest interest possible in the special department published for them in Farm and Fireside, and in order, also, to encourage them to literary efforts, we shall, each issue, devote at least one column of the department to short stories that our young friends may prepare.

These articles should not be of more than two hundred words at the most, and should be written plainly in ink on one side of the paper. We shall not pay for these articles, and should you desire stories returned, in case we are not able to use them, a stamped and addressed envelope should be enclosed for the purpose. Communications are not invited from persons who are more than sixteen years of age. Write plainly your name, post-office address and your age.

Perhaps there is some historic old place near your home that holds a story never published, some generally interesting tale that papa, mama, grandpa or grandma has told you. These and hundreds of other similar subjects may be discussed by you. Be truthful, brief, and use your own language.

Address Editor Young People's Department, Farm and Fireside, Springfield, Ohio.

The Indian Boats of Alaska

BY JOHN STETLER, AGED FIFTEEN

Gold seekers who visit Alaska soon become acquainted with the native Indian and find much about him that is interesting. The Indian's boats in particular are objects of curiosity. They are made of skin stretched over rough frames, and look unwieldly enough. They are roomy and stanch, however, and the Indians manage them with great skill. When not needed on the water, they are quickly converted into a dwelling, as shown in the accompanying illustration, the boat being turned partly over and annexed to a rough tent. The paddles which are used, and one of the Indians, are also shown in the picture.

The Lovers' Leap

BY FRANKLIN C. HAMILTON, AGED SIXTEEN

In the Spring Branch Cañon, Colorado, which is two miles north of the Muddy Creek Cañon, is a rock towering eighty feet up the side of the cañon. At the very foot of this natural pillar are five graves that came there in a very mysterious manner. The Ute Indians tell the story as follows:

"About 1819 there lived a Ute chief in the Greenhorn Mountains. He had a lovely daughter, who was his only child, and she was idolized by the tribe. When she was seventeen she fell in love with a young Cheyenne brave. It was of course against the laws of both tribes for a Ute to marry a Cheyenne, so an elopement was planned. The Cheyenne lover was to picket two swift horses in the cañon. He would then make his way cautiously to a chosen point near the village, which was high above where the horses were to be left, and he was to whistle like a squirrel, to let the maiden know he was on hand. The Ute would stay around the village a while, so as to throw off suspicion. She would then wander out of the village quietly and meet her lover, and together they would go down into the cañon, mount the horses, and make tracks for the Shoshone nation, where they would take refuge and become Shoshones.

"The first part of the plot worked so well that the maiden was gone fully ten minutes before her absence was discovered. It was soon known throughout the village that the chief's daughter had disappeared, and warriors instantly made ready for a chase.

"The Cheyenne walked slowly, so that there would be no noise. He was close to the narrow path which led down the cañon's side, when he heard the Utes following. He turned to escape with the maiden up the cañon, when right on the top of the Lover's Leap Rock he met a large band of Utes who were out after the maiden. It was useless to fight, so the Cheyenne embraced the maiden, and when the Utes were almost upon him he turned and leaped down over the cliff, and was crushed on the rocks below. The Ute maiden did the same.

"The Cheyenne and his bride were buried side by side. The other graves are those of the young bride's father, mother and cousin. Upon the grave of the Cheyenne is a large leafy tree of the cottonwood species."

ALASKA INDIAN BOAT HOUSE

Wit and Humor

For the Defense

MA—"I hear that you've been playing with Donald Smith again, Tommy. Now, I told you—"

TOMMY—"Playing with him! You see the black eye he's got, and you'll soon guess if there was any playing about it."

◈

Nerve to Spare

"Well, of all the impudence I ever heard!" exclaimed Mrs. Jorkins, sinking into a chair as if some painful recollection had almost overcome her.

"What's the matter, my dear?" meekly inquired her husband. "Is anything wrong?"

"It certainly isn't right," snapped Mrs. Jorkins. "The neighbors who have just moved in next door are going to have a party. Well, they must needs send over to borrow our drawing-room rug. Wishing to be kind and neighborly, I let them have it, but very soon they sent it back, and rudely declared they didn't think it handsome enough to go with their furniture, and could I lend them the money to go and buy a new one!"

Maid—"Please, sir, there's a gentleman downstairs."
He—"Well, show him up to the sitting room."
Maid—"But, sir, he has come to clean the chimney."
He—"Well, then, show him up the chimney."

◈

The Right Kind of Man

"Your testimonials," said the business man to an applicant for a situation, "are very good, and you appear to be a very pushing traveler. By the way, I suppose you have never been in trouble of any kind?"

"Once in my life, sir," was the reply. "I was in prison for a month."

The business man started.

"Well—er," he began, "I'm afraid that puts rather a different complexion on the case. But tell me what you were sent to prison for?"

"For nearly killing a man who refused to give me an order," answered the applicant.

"Good!" said the business man. "You're engaged!"

1. Rising to the Bait 2. A Bite
3. Caught 4. Landed
—From St. Nicholas

AN ORIENTAL FISH STORY

◈

MISTRESS (to servant)—"Be careful not to spill any soup on the ladies' laps."

BIDDY (new in the service)—"Yes, mum; where shall I spill it?"

◈

Making Sure

The sexton of a "swell colored church" in Richmond was closing the windows one blustery Sunday morning during service when he was beckoned to the side of a young negress, the widow of a certain Thomas.

"Why is you shettin' dose winders, Mr. Jones?" she demanded in a hoarse whisper. "De air in dis church is suffocatin' now!"

Young Duck—"Land's sake! Isn't that fox scared of me, though!"

"It's de minister's orders," replied the sexton obstinately. "It's a cold day, Mis' Thomas, an' we ain't goin' to take no chance on losin' any ob de lambs ob dis fold while dere's a big debt overhangin' dis church."—Harper's Weekly.

◈

SHE—"Because I cannot marry you, do not be disheartened. You must face the world bravely."

HE—"It isn't a question of the world; I've got to face my creditors."

OUR MONEY-SAVING CLUBBING OFFERS

Farm and Fireside 3 yrs.
Green's Fruit Grower 1 yr.
Vick's Magazine 1 yr.
The Roosevelt Family Calendar

All four, including Farm and Fireside 3 years, only $1.00
Canadian subscriptions $2.00

These subscriptions may be either new or renewal, and sent to one or different addresses.
This is your last chance to get a Roosevelt Calendar!

SEND ALL ORDERS TO

FARM AND FIRESIDE Springfield, Ohio

HAS YOUR SUBSCRIPTION EXPIRED?

You Must Act Now!

If You Wish to Accept One of These Low-Price Offers

If your subscription to FARM AND FIRESIDE has expired or is about to expire, or if you are not a subscriber now, read every one of these offers.

You know and we know that FARM AND FIRESIDE is the biggest moneys' worth in the periodical field to-day—that it is giving more reading matter by half than any other farm paper published for double the price.

Now we are adding a notable new novel and several other features.

We are increasing the departments, adding new editors and paying a handsome amount to contributors, and—

We haven't raised the price—not yet.

But—These low-price offers can't last much longer.

In addition to all these good things, we are offering the handsome Roosevelt Family Calendar, 11 by 14 inches, printed in sepia on fine quality super calendered stock, with the very latest picture of President Roosevelt and his family on the front, to all of our old readers who will renew promptly, and to all new subscribers who send in their subscription by **February 15th.** This superb calendar can be obtained in no other way.

These offers will be absolutely withdrawn February 15th—Don't forget.

To you, however, as a friend of FARM AND FIRESIDE, we extend this final opportunity to accept the most extraordinary and liberal offers ever made by an American periodical.

WHAT YOU GET

Farm and Fireside

Twenty-four numbers beginning with the February issues and containing the great article on "The Secretary of Agriculture and His Work," the most interesting article that has ever been written about Secretary Wilson—the farm paper that for over thirty years has worked for, and helped farmers—the cheapest, greatest and best farm paper in America.

The Publisher's Gift

to you, if you accept one of these offers before they expire, will be a copy of the handsome Roosevelt Family Calendar, which President Roosevelt, himself, in a letter from the White House, authorized us to give our readers. It is an ornament to any home, and will last for years—something that you will be mighty glad to have. But remember, you must act before February 15th to get it!

FOR 20 DAYS ONLY

these great limited offers will be extended to you, as a friend of FARM AND FIRESIDE, and for only 25 cents you can get **all** the good things mentioned in this advertisement. Your order must be mailed by February 15th—no later. Accept one of these great offers now.

The Feature Magazine Supplement

Something unusual in farm papers, and original with FARM AND FIRESIDE—hundreds of pages of stories, features, games, puzzles, illustrated articles—reading matter for the whole family. Free if you accept one of these offers.

A Complete Novel

"The Impostor," is now being published serially in FARM AND FIRESIDE for the first time, and more are to come—better than ever. Each of these novels if bought in book form, would cost you several times the price of FARM AND FIRESIDE for a whole year.

Twelve Departments

at least will be conducted in FARM AND FIRESIDE during 1908. These will cover every department of farm activity and each department will be edited by **the** authority in his particular line—an active practical worker. Two or three will be new departments—departments that will be even more helpful than the present ones because they will show by personal experience how farmers and their wives have made and are making money, in ways that you are eager to know about.

HOW YOU GET THEM

When you accept one of these offers below, you not only get the best farm paper in the country, FARM AND FIRESIDE, but also all the other good things mentioned in this advertisement, including the superb Roosevelt Family Calendar. Our special offers of seven years' subscription for $1.00, or three years' subscription for 50 cents are better propositions than any other agricultural paper in the world offers.

OFFER No. I.

$1.00

gives you all these good things with Farm and Fireside SEVEN YEARS—168 times at a cost of only 6-10 of a cent a number.

OFFER No. II.

50c

gives you all these good things with Farm and Fireside THREE YEARS—72 times at a cost of only 7-10 of a cent a number.

OFFER No. III.

25c

gives you all these good things with Farm and Fireside ONE YEAR—twenty-four times, at a cost of practically one cent a number.

These Prices are Limited to February 15th. Fill out the order blank below AND SEND IT TO US NOW.

Pictures and Illustrations

will appear in each number of FARM AND FIRESIDE, and there will be more of them than ever. This is only one of the features of FARM AND FIRESIDE that puts it in the lead of farm papers—and way in the lead, too.

More Reading Matter

than a $4.00 magazine gives together with all these other fine things will be yours if you take FARM AND FIRESIDE during 1908. The twenty-four numbers will be equal to 1600 standard size pages, and will give you more reading matter by half than any other farm paper at **twice** the price—and all for 25 cents or less a year!

The Greatest Farm Paper

that's what FARM AND FIRESIDE will be for 1908—the biggest, best and cheapest farm paper ever published. Even now, it prints and circulates more copies each month than any other farm paper. Tens of thousands of our big family have subscribed for from three to seven years in advance. That shows what they think of it! The FARM AND FIRESIDE family now numbers at least two million readers. More than ever before FARM AND FIRESIDE will be "The Giant of the Farm Press!"

A BLUE MARK ON PAGE 3

shows that your subscription has expired. Renew promptly by accepting one of the above offers before they are withdrawn.

RUSH THIS ORDER BLANK

Editor, FARM AND FIRESIDE,
Springfield, Ohio.

Dear Mr. Editor:—I accept your special limited offer No. ..... as advertised in the January 25th Farm and Fireside, for which I enclose ..... Yours truly,

.....

.....

.....

.....

This coupon entitles the sender to the Roosevelt Calendar and all the things mentioned above.

Bachelder Talks to Farm and Fireside

The Master of the National Grange Chats Interestingly With Paul Creighton on the Live Subjects With Which the Average Farmer Has to Deal

THE STATE LIBRARY BUILDING in Concord, New Hampshire, is the handsomest and costliest building in the state, and it is here that Hon. Nahum J. Bachelder has his suite of rooms. It is here that he attends to the large amount of office business that comes to him as Master of the National Grange and Secretary of the State Board of Agriculture of New Hampshire. It was here that I found him at work one beautiful afternoon last November. I had been told in advance by one who had known him for years that I would find him a man of great kindness and courtesy, and I came away feeling that he had sustained this reputation. A farmer's boy born and reared in New Hampshire, I found him most enthusiastic regarding country life and the pleasures it has to offer people the greater part of the year. If Mr. Bachelder has any hobby more pronounced than another, it is his belief in the wisdom of more of the city dwellers getting "back to the soil" for six or eight months of the year. Indeed he said, during my talk with him:

"If there is any one thing more than another in my public life of which I am rather proud, it is my work along the line of increasing the interest in our New Hampshire farms for summer homes. Hundreds of our once deserted farms, or farms of which very few acres have been cultivated in recent years, have been transformed into beautiful summer homes."

No part of our country offers so many charming sites for summer homes as are offered in New England, and it has been largely through the work of Mr. Bachelder that the farmers are receiving such good prices for their farms from city residents. Mr. Bachelder sends out annually a very handsome and unique publication, entitled "New Hampshire Farms for Summer Homes." This is in magazine form, and is printed on the heaviest plate paper and beautifully illustrated. It contains a great variety of information and is a publication of which Mr. Bachelder may be justly proud. It has attracted buyers of farms for summer homes from all over the United States to New Hampshire, and a business man of Concord who has spent most of his life in New Hampshire said to the writer:

"I do not believe that any man in New Hampshire has done so much for the state as has Nahum J. Bachelder, and the farmers in particular owe him a debt of gratitude."

When asked what was the greatest need of the farmer of to-day Mr. Bachelder said:

"The farmer of to-day needs, more than anything else, to adapt himself to present-day conditions. He needs to realize that farming, particularly in New England, is not what it was thirty or forty years ago. The farmer must grow the things that the market demands. I am willing to go on record as saying that the winter apple is the best-paying product in New Hampshire."

The writer felt the force of this statement, because of the fact that only the day before he had paid five dollars in Boston for a barrel of Baldwin apples of but fairly good quality. When I asked the marketman why apples of good quality were selling for from five to six dollars a barrel in Boston, and "fancy" apples were two, and even three, dollars a bushel, he said:

"I suppose that it is partly because tens of thousands of barrels of our American apples are now going to Europe each year. Our American farmers ought to go more and more into the winter-apple business and make an actual business of it."

Mr. Bachelder also let fall the remark that the pine-tree crop was a mighty good crop for the farmer to grow, and he cited instances of New Hampshire men selling the standing trees on some of their wood lots for five and six thousand dollars.

"And that crop," he said, "did not cost the farmer a cent excepting for the small amount of taxes paid on the land. Nature did the rest. It is a long-time crop, but a mighty profitable one when it is harvested. Prices for standing timber are steadily increasing, and the pine-tree crop is a good one for the farmer to raise."

Asked what he thought of the egg and poultry business, Mr. Bachelder said:

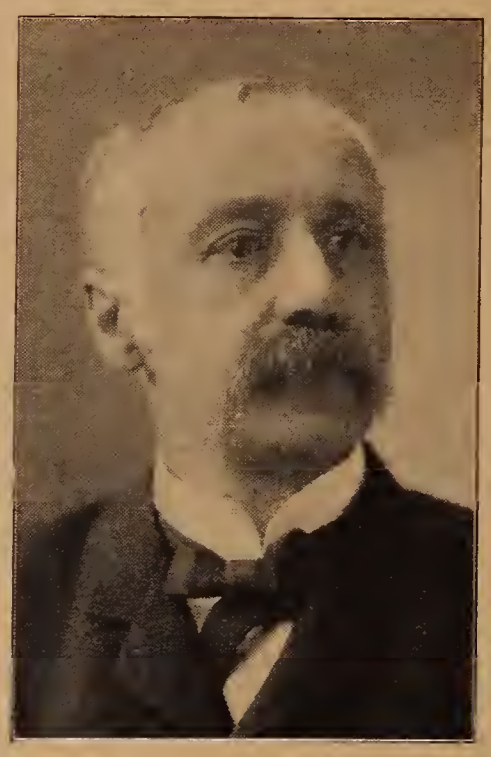
"That, too, is all right when it is well managed. Eggs and poultry have never brought such high prices as now, and the demand for them grows right along."

When asked to say something in regard to the general condition of agriculture in our country to-day, Mr. Bachelder handed the writer some proof sheets, and said:

"Here are the proofs of the meeting of the National Grange in Hartford two weeks ago, and you will find in my annual address the best answer to your question."

Looking over the address we find the Worthy Master saying:

"Agriculture to-day represents more capital and gives direct employment to a greater number of people than any other single industry in the country. The thirty-five million people classed under the head of agricultural people produced last year crops to the value of about seven billions of dollars—an amount so vast as to be almost beyond comprehension. The total yield of crops this year may be slightly less than the crops of 1906, but their cash value will be even greater. The farm products in their original form, or in the form of cattle, sheep, hogs and horses, have overflowed the great granaries, clogged transportation facilities and brought gold from foreign countries to our great commercial centers to quicken the flow in the great arteries of trade. The indirect result of this vast production has been a period of prosperity to all our great commercial and industrial interests and placed our nation in an enviable position among the nations of the world. These facts warrant the statement that agriculture is not only the great industry of the country, but the most important in the nation's industrial prosperity. Agriculture prospers not because other industries prosper, but other industries prosper because agriculture prospers. The promotion of agriculture embodies the highest type of statesmanship, for as this industry is promoted the welfare of all is advanced."



THE HON. N. J. BACHELDER

"Is the Grange movement gaining in our country at the present time?" was another question asked of Mr. Bachelder, and he said:

"It is." In proof of this statement he referred again to his address before the National Grange, in which he said of the present condition of the order:

"While the membership of an order does not necessarily fully indicate its strength, the increase or decline in membership indicates whether the order is going forward or backward. The twenty-five State Granges entitled to representation in the National Grange one year ago are all represented today, and we have in addition the State Grange of Iowa, which has been unrepresented in previous sessions since the year 1902. The membership of the Grange in the country has made a net gain during the year over all losses of eight per cent, a larger net gain than has been recorded in any year for over thirty years. This should be a matter of encouragement to those who appreciate the fact that increase in membership is the basis of increased influence and increased efficiency in serving the interests of agriculture."

The somewhat vexed farm-labor problem is one in which Mr. Bachelder is greatly interested, and he feels it to be one of the most serious problems the farmer has to solve. Referring to it, he says that the Department of Commerce and Labor in Washington has recently begun a movement for advertising abroad the demand for agricultural laborers in this country, giving specific requests for the same that may be of advantage to the farmers. It is possible that through some co-operative effort a portion of the immigrants coming from farms in other lands could be directed to farming employment here where the demand is greatest. The importance of this matter to the agricultural interests of the country warrants its careful consideration even by those in charge of the affairs of the national government.

A few words in regard to the man who has been, and is to-day, such a force in the world of agriculture will no doubt be of interest to the great farming community, which is the most necessary and important community in any country having agricultural resources. Mr. Bachelder was born on a farm in Andover, New Hampshire, in September of the year 1854. He was educated in the public schools, in Franklin Academy and at New Hampton Institute. When he reached manhood's years he began the pursuit of agriculture on the farm that had belonged to generations of his ancestors. It is a farm that was cleared from the wilderness by his great-grandfather, Captain Josiah Bachelder, who settled on this farm in the year 1782. Additions have been made to the farm, until it now contains about eight hundred acres. Here Mr. Bachelder has had his home all of his life, with the exception of the time when his official duties have made it necessary for him to live in Concord. He became a member of the Grange in the year 1877. He served as Lecturer, and subsequently, for four years, as Master of the local grange, and was chosen secretary of the State Grange in December 1883. He held this position until he was elected Master in 1891, meanwhile serving as Charter Lecturer of Merrimack County Pomona Grange. He filled the office of Master of the State Grange for twelve years, or until December, 1903. He became a member of the legislative committee of the National Grange, and in 1899 was chosen Lecturer of the National Grange, and while filling this office he spoke in eighteen different states of the Union, going as far west as Oregon. He has been secretary of the New Hampshire Board of Agriculture since the year 1887, and he also served for many years as a member of the Board of Cattle Commissioners and also as Commissioner of Immigration. He has held other positions that have helped him to do more for the promotion of the cause of agriculture than any other man in New Hampshire. In the year 1902 there came to him the strongest proof of his popularity, for in that year he was elected Governor of New Hampshire by a plurality of nearly nine thousand votes. As chief magistrate of his native and beloved New Hampshire he was what he has always been, and what he will ever be, a man of the people. While governor of the state he became personally known to more people than any other governor had ever been. Now, as the official head of the Patrons of Husbandry and Secretary of the State Board of Agriculture he is serving the farmers of his country well.

THE STATE LIBRARY OF NEW HAMPSHIRE, SAID TO BE THE FINEST PUBLIC BUILDING IN THE STATE, AND IN WHICH MR. BACHELDER HAS HIS OFFICE

The Grange and Agriculture

THAT the pursuit of agriculture is the one final basis for all national life and all material prosperity is a statement so trite that we would hesitate to repeat it save as a premise for what follows; that is, the unique relation between agriculture, the one great primal industry, and the Patrons of Husbandry, the one great Order of agricultural fraternity.

In the improved condition of agriculture and agriculturists which the Grange has done so much to bring about, education by the schools, the press and the contact of individuals, has been a prime factor and one which never again will be neglected.

The agricultural colleges and experiment stations have done and are doing a great work, constantly increasing and expanding. It is to be hoped that his expansion and increase will continue, to the farthest bounds allowed by a due regard for economy, efficiency and good results.

The Grange believes, also, in an extension of agricultural branches—call it Nature study, or what you will—into all the divisions of our public schools. The child in the primary grade is not too young to learn the lessons of the farm. He never grows too old to draw fresh inspiration from the soil, to broaden his horizon, to increase his mental and spiritual stature in the good air of the out of doors.

Take the educated farmer, give him the opportunities which the Grange affords, let his ambitions and progressive spirit have a chance, and the result is well-nigh an ideal citizen, ready and willing and able to do his part in maintaining the republic which our ancestors won by arms and which we must not lose, in peace, to an autocracy of wealth.

A great majority of the members of the Grange know, believe or feel that the time has come for the further restriction of monopoly; the better provision for improved service at a less cost by common carriers and public utility corporations; the elimination of graft from government, be that graft great or small, in tariff or timber, in laws or in land; the improvement of our highways; the development of our inland waterways; the irrigation of our arid lands; the protection of our forests; the equalization of tax burdens, and the doing away with special privileges to favored classes under whatever guise they are granted.

These are questions as broad as the nation, in which members of the Grange have equal share with all others of our people.

Turning to the questions, still national, but which more particularly concern agriculture, one can look back with pride upon the history of the National Grange and what it has accomplished.

Largely through its efforts agriculture has representation in the President's cabinet and has devoted to it one of the most important and rapidly growing of the national departments. The evils of imitation, substitution and adulteration of food products and similar articles have been put under the national ban and largely decreased thereby. —H. C. Pearson in National Grange.

We absolutely guarantee all advertisements in FARM AND FIRESIDE. You can write to our advertisers with the confidence of receiving fair treatment from them.

E

A POINT ON THE TELEPHONE QUESTION

The telephone has its place on the farm—but that place should not be, for instance, in the hallway upstairs, where one can scarcely hear the bell ring, and when you do hear it, you had just about as soon not go; nor is it in an inconvenient corner downstairs, where you cannot get at it without getting in a cramped condition; nor is its place in the parlor for ornament. The telephone box should be put in the most convenient place in the home, preferably near a window, so that while one is holding a conversation he can look out upon the picture without. This will inspire so much cheerfulness that the person at the other end will wish to prolong the conversation. W. J. B.

◈

SAVING FUEL

With us the matter of fuel supply and where to get it is really a burning question. Wood is out of reach here. We must burn coal, and coal is way up in price. The ordinary methods of burning coal have always involved much waste. The ashes as they come from the furnace, the cook stove and heaters contain a large percentage of combustible material. We not only allow a large portion of the heat that we get from the burned fuel to escape through the chimneys without getting any benefit from it, but we also fail to secure the full amount of heat from our fuel.

Coal is far too expensive to allow a lot of it to be thrown out with the ashes. Many make a practise of sifting the ashes and return the coarse portions, mixed with coal, to the fire. We should always try to save every bit of combustible matter still left in the ashes. I find a good ash sifter a really very necessary piece of equipment for the household. Such a sifter is easily constructed. A few boards, or some dry-goods boxes obtained at the store, and a piece of wire screen with three or four meshes to the inch are all the material needed. Neither does it require much ingenuity or mechanical skill to make it so that the dust of the ashes will not annoy the operator.

T. GREINER.

◈

GROWING CLOVER

I have grown clover for a number of years and have found that if the best results are desired good seed of a high germinating power must be used. The seed should test at least ninety-five per cent germination. Those who must buy seed for spring sowing should test, or have tested, a few samples of the seed before purchasing. By so doing a few dollars will likely be saved and an unsatisfactory stand of clover prevented.

As to the manner and time of sowing clover seed, no rule can be given that will apply to all sections of the country. It is well for each farmer to determine by actual experiment on his own farm what manner of sowing is best suited to his particular locality and condition of soil. From my own practical experience I find that if clover is to be sown on wheat it should be sown from the first to the fifteenth of March. When sown at this time the alternate freezing and thawing of the ground works the seed downward to the proper depth, while the action of the frost and early spring rains generally effects a sufficient covering of the seed to ensure germination. When freezing and thawing does not, through the lack of moisture, render the surface sufficiently porous to embed the seed, it is well to run a light harrow over the ground after sowing the seed, and to follow it with a roller, which will compress the soil about the roots of the wheat as well as aid in properly embedding the clover seed.

There is a great difference of opinion as to the quantity of seed to sow. I sow about eight pounds to the acre. However, a great deal less will do as well, providing the seed is good and is sown evenly on the ground.

Clover should not be pastured the first fall after sowing the seed. Occasionally this may be done without injury if the season is favorable. If there is a good growth, and the ground so dry that stock do not tramp it too deeply, it can be pastured moderately without harm. When a crop of hay is sought, the field should not be pastured in the spring.

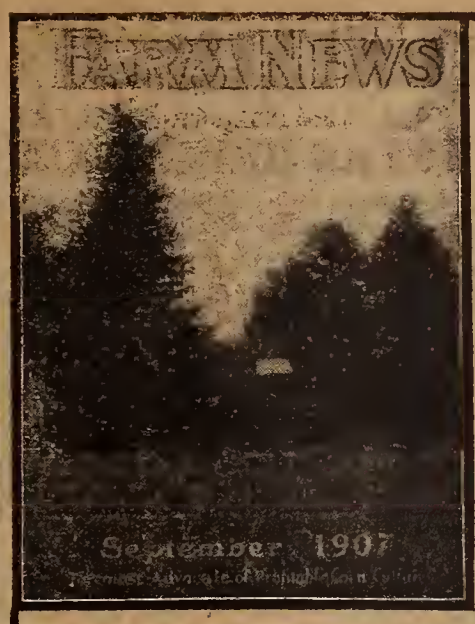
WM H. UNDERWOOD.

◈

Statistical returns from all the leading hop-growing countries indicate that the crop of 1907 is large in quantity and fine in quality. Low prices are indicated, as considerable of the 1906 crop is still in the hands of growers and dealers.

◈

When you are sitting comfortably by the big wood fire reading FARM AND FIRESIDE, don't fail to look over the advertisements. You will find so many things with which to satisfy your needs and add to your happiness.



THREE For 35 Cents

Here is a bargain that should appeal to every reader of FARM AND FIRESIDE from Maine to California. We have just made an exceedingly advantageous contract with the Farm News whereby we can offer to the FARM AND FIRESIDE family, FARM AND FIRESIDE, Farm News, and Prof. P. G. Holden's famous corn book "The A. B. C. of Corn Culture" all three for only 35 cents. If you buy these elsewhere you will have to pay the

REGULAR PRICE $1.00

HERE IS OUR OFFER

Farm and Fireside 1 year 25c
Farm News 1 year 25c
The A. B. C. of Corn Culture 50c

All three only **35c** one-third regular price.

Farm and Fireside still remains the Giant of the Farm Press—the greatest value for 25 cents—or double that—ever offered in a farm paper. It prints and circulates each month more copies than any other farm paper. That shows how good it is! Thousands and thousands of the FARM AND FIRESIDE family have paid for from three to seven years in advance. That shows what they think of FARM AND FIRESIDE!

Farm News has been standing for the farmer and the farm home for the past twenty-six years, and goes into 250,000 homes every month. It is practical—a "people's paper" in every sense of the word. Comes every month and has an excellent editorial staff. In every way it is a worthy paper to club with FARM AND FIRESIDE.

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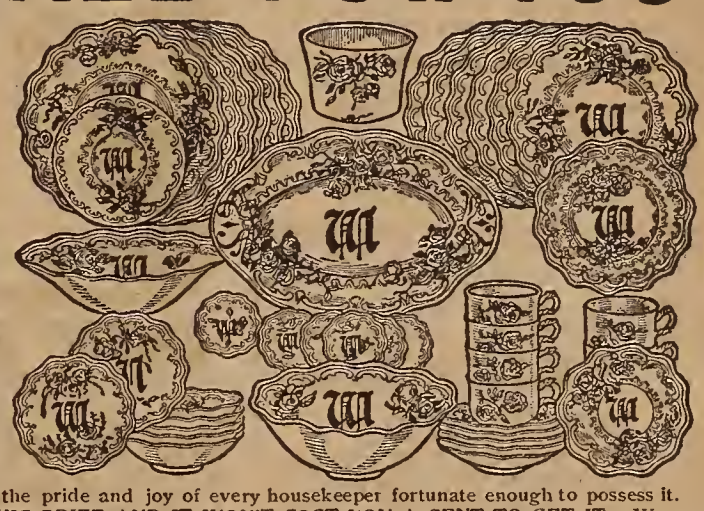

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This set is just as shown in the illustration. This daintily decorated, embellished, gold initial dinner set, elaborately decorated with wild roses with green leaves and foliage, *every piece trimmed with coin gold*, the next thing to Haviland china, which is owned by multi-millionaires, equal to a set costing many dollars in your local stores—this **PRIZE PREMIUM** is **YOURS** for a little of your leisure time. Your initial in *gold* is put on as shown above. This dinner set will be the pride of your home and you can **WIN** it without going outside of your house to do it.

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Water the stock, but never the milk.

Keep close to the heart of your farm.

No dairy can long stand half milk, half water.

One glaring virtue may eclipse many faults.

Men with an agricultural education alter cases.

Those who take life easy make life hard for others.

Many of the most thoughtful sermons are wordless.

Farmers should count noses over the pig pen daily.

Let us keep up our end—especially the odds and ends.

Man's best traits are seen when he becomes a farmer.

There's now and then a one-horse farm of another color.

Many people purchase prize pullets. Moral—Raise them.

It is a wise farmer who knows the hens that are not laying.

Bid every member of the family good-morning every morning.

When a hen has quit laying it is enough to cause her to lose her head over it.

A farmer's business is to gain a little in the knowledge of farming each day.

The man who walks in the path of the borrower will have many debts to meet.

"The more I see of town," says Farmer Wise, "the more I am satisfied with the country."

Money may make the mare go, but we do know that the going of the mare makes money.

An easy-going man may find his path so full of rough places that it will not be easy going.

The man who lives by his tools, like the man who lives by his wits, must frequently sharpen them.

The sweetest fruit may have come from the bitterest root—but who cares how bitter the root, if sweet the fruit.

We may not be able to prevent our cows from being lightning struck, but we can prevent their being son struck.

Hitting the nail on the head does not worry some farmers half so much as pulling out a nail that has no head.

What you bring away from your field in straw and grain depends largely on what you carry to it in cultivation.

Dismiss the things in the rear of you; tackle the things that are up with you, and prepare for the things ahead of you.

There are some people interested in the whereabouts of work to such an extent as to enable them to keep away from it.

WILLIAM J. BURTSCHER.

BOOKS RECEIVED

THE A B C AND X Y Z OF BEE CULTURE. One dollar and fifty cents postpaid. By the A. I. Root Company, Medina, Ohio.

FEEDING FARM ANIMALS. By Prof. Thomas Shaw. Two dollars postpaid. The Orange Judd Company, New York.

FORAGE CROPS. By Prof. Edward B. Vorhees. One dollar and fifty cents net. The Macmillan Company, New York.

PROFITABLE STOCK FEEDING. By Prof. Howard R. Smith. One dollar and fifty cents postpaid. American Sheep Breeder Company, Chicago, Illinois.

MODERN SHEEP: BREEDS AND MANAGEMENT. By "Shepherd Boy." One dollar and fifty cents postpaid. American Sheep Breeder Company, Chicago, Illinois.

THE CONFLICT OF THE AGES. C. L. Poorman, Bellaire, Ohio, author and publisher. One dollar and twenty-five cents postpaid.

ALFALFA IN OHIO. By Allen O. Myers. One dollar postpaid. Fred J. Heer, Columbus, Ohio.

DISTILLATION OF ALCOHOL AND DENATURING. By F. B. Wright. One dollar postpaid. Spon & Chamberlain, New York.

THE COMMON-SENSE POULTRY DOCTOR. By John H. Robinson. Fifty cents postpaid. Farm-Poultry Publishing Company, Boston, Massachusetts.

ALADDIN OF LONDON. By Max Pemberton. Sixty-five cents postpaid. Empire Book Company, New York.

THE LOVE THAT PREVAILED. By F. Frankfort Moore. Sixty-five cents postpaid. Empire Book Company, New York.

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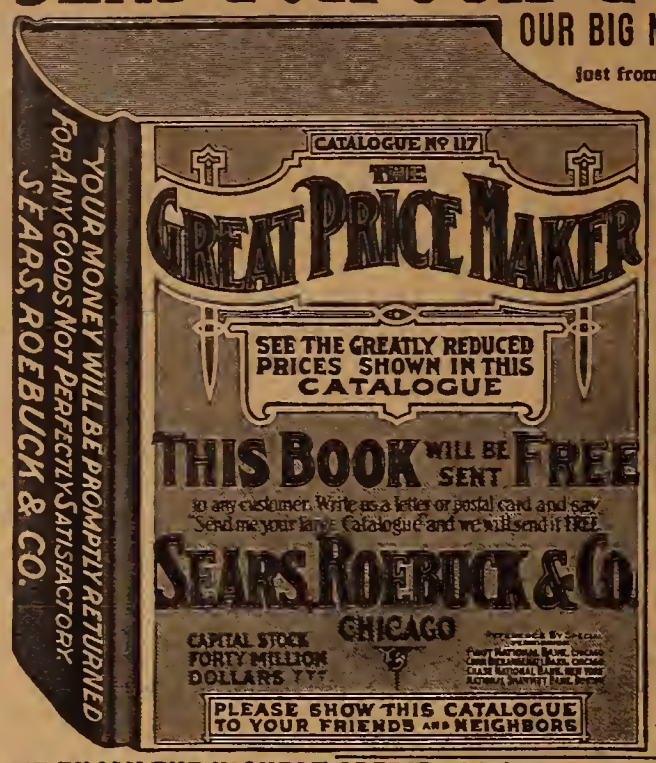

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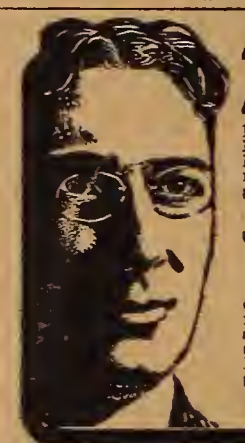

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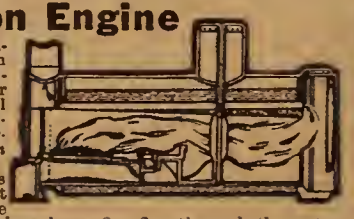

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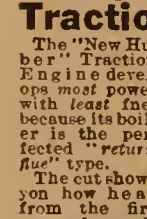

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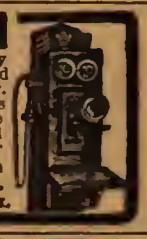

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Vol. XXXI. No. 9 SPRINGFIELD, OHIO, FEBRUARY 10, 1908 WESTERN EDITION

Barley---A Ready-Money Crop for the American Farmer

By Prof. R. A. Moore of the Wisconsin Experiment Station

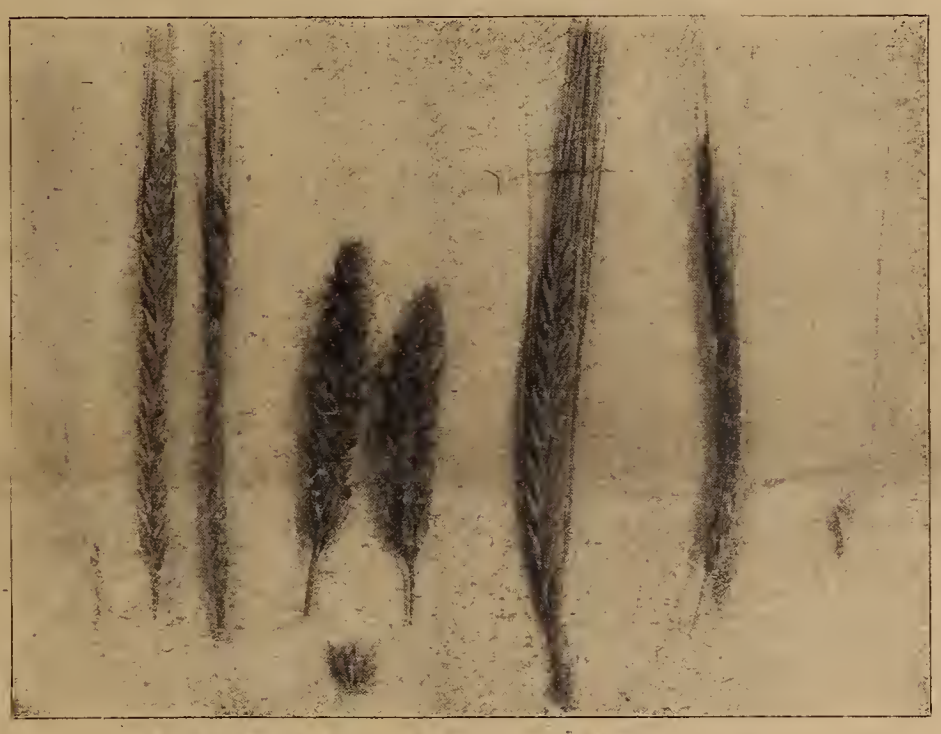
No crop has been cultivated longer than barley, with wheat as a possible exception. Barley was well known to the ancients many years before the Christian era, and was grown as a bread-making crop and to a limited extent as a feed for farm animals throughout Europe. Barley continued to be the principle bread-making plant until the sixteenth century, when it was gradually replaced by spelt, emmer, rye and wheat, which were considered more palatable and satisfactory.

Barley belongs to the grass family, and is of the same tribe as wheat and rye, although differing widely in its organs of reproduction and formation of head.

VARIETIES

For practical purposes barley may be classified as six-rowed, four-rowed and two-rowed. Barley is also known as beardless, bearded and hulless, which are variations of the first classification. The four-rowed barley is not a distinct variety, but a variation of the six-rowed, as often it will be observed that the six-rowed barley drops two rows midway up the spike, the upper portion being merely four-rowed. As with wheat, we have fall and spring varieties. The fall or winter barleys do best in the South, while the spring barleys are grown almost exclusively in the North.

Wisconsin is one of the four great barley states, and the sale of this cereal brings to the farmers of the state from four to eight million dollars annually. So favorably impressed is the writer with the barley crop that it seems more care and attention should be given to this cereal



TWO-ROWED, BEARDLESS, AND BEARDED HULLESS, FROM LEFT TO RIGHT

The larger portion of Wisconsin farmers grow barley for the market, which is not the most excellent plan. More attention should be given to this cereal as a stock food. On the Pacific slope barley is fed extensively to horses with good results. When used as a feed for horses the barley is usually taken to mills and it cannot be beaten, and well may the farmer pay more attention to its growth.

TESTING THE SEED GRAIN

Barley should be graded with a fanning mill or grain grader before sowing; the light kernels should be removed, so far as possible. When this has been done, a test ing, purchase that seed which gives a germinating test of from ninety to one hundred per cent and which shows strong vitality.

After carrying on trials with seventy-five varieties or over of barley at the Wisconsin station through several years I feel convinced that the strong, six-rowed, bearded barleys are the greatest yielders and the most profitable barleys for our farmers to grow for all purposes.

SOWING THE SEED

Barley should be sown on rich soil, fall plowed preferred. The land should be thoroughly disked and a mellow seed bed prepared. Sow with drill or broadcast seeder, using from one and one half to two bushels of seed to the acre; the lighter sowing should be on the richer soil, to prevent lodging, and where the barley is used as a nurse crop with grass seeding. Barley is the very best nurse crop that can be grown with alfalfa or clovers, but when so used not more than one bushel of seed to the acre should be sown.

Barley is shallow rooted, and consequently does not rob the young clovers and grasses of the moisture to the same extent as other cereal crops. Do not sow before the ground is in good condition. The larger portion of the barley in Wisconsin is sown between April 20th and May 1st.

HARVESTING

Cutting should not be delayed until the grain is over-ripe, as the straw becomes brittle near the head and much of the grain is lost. After harvesting it should be placed in shocks and capped, as the

FIELD OF SELECT ODERBRUCKER BARLEY. YIELD SIXTY BUSHELS TO THE ACRE. EXPERIMENT STATION FARM, MADISON, WISCONSIN

in our grain-raising states. More pounds of barley, on an average, can be raised to the acre than of any other of the small grains. Barley is not attacked by rust and other fungous diseases to the extent of other cereal crops.

the grains crushed between rollers so as to make the mastication easier. If ground the meal is somewhat sticky, and in this condition cannot be readily eaten by the horse, but where crushed it makes an ideal feed. As a feed for hogs and sheep

should be made to determine the germinating power and vitality of the seed as a guide to the amount to sow to the acre.

If the farmer is obliged to purchase his seed grain he should send in advance to his seedsman and get samples; after test-

barley will have a better color if protected this way. Care should be taken to get the barley under proper cover soon after harvesting; it materially injures the sale if discolored by heavy dews or rains. The objection that was formerly raised against

Be Sure to Read Our Liberal Offers on Page 22

barley on account of the obnoxious beards, which made it difficult to handle, has given way since the introduction of the self binder and self-feed thrasher.

IMPROVING

The Wisconsin Experiment Station has been putting forth especial efforts in the way of improving the barley crop. New varieties of barley have been bred to take the place of many of the mixed varieties now in use. The improved Oderbrucker barley is rapidly replacing the old mixed barleys of the state and is giving yields varying from five to ten bushels more to the acre. No less than one and one half million bushels of Oderbrucker barley were grown in Wisconsin last season, nearly all of which will be used for seed. Half of the barley acreage of the state will be sown to Oderbrucker barley in the season of 1908.

Pedigreed varieties of barley have been bred at the station farm which give great promise, and as soon as these varieties can be grown in large quantities they will be disseminated throughout the states as an improvement on the select barley now so widely grown. We feel at the present time that great barley centers should be established in the various states where farmers in whole townships or counties will grow this one select breed of barley. This will enable maltsters and other purchasers of barley to get one uniform grade.

TESTS WITH ODERBRUCKER BARLEY (WISCONSIN NO. 55)

One hundred and fifty former students of the college carried on tests with the Select Oderbrucker variety of barley in 1906. The information is given herewith:

Number parties reporting	127
Number of counties from which reports were received	45
Number sowing on fall-plowed land	90
Number sowing on spring-plowed land	37
Number of cases in which barley remained erect	91
Number of cases in which barley lodged	21
Number of cases in which barley rusted badly	2
Number of cases in which barley rusted slightly	28
Number of cases in which barley did not rust	97
Number of cases in which smut developed	87
Average yield of Oderbrucker barley in bushels	39.1
Average yield to the acre of best other variety in comparison	33.6
Yield to the acre of Oderbrucker barley over other varieties on trial	5.5
Average yield to the acre of Oderbrucker barley on fall-plowed land	39.9
Average yield of Oderbrucker barley on spring-plowed land	37.5
Yield on fall-plowed land above that on spring-plowed land	2.4

From the above table we note that the Oderbrucker barley was grown successfully over a wide range of territory in Wisconsin, and outyielded its closest competitor by 5.5 bushels to the acre. We also find that rust was not generally prevalent, but that smut is becoming quite general in barley crops. Smut can be eradicated by the modified hot-water treatment, whereby the sacks of seed barley are soaked in cold water for twelve hours, and after draining, submerged in water held at a temperature of one hundred and thirty degrees Fahrenheit for ten minutes. Barley must be sown immediately after treatment or it will sprout.

An average of 2.4 bushels to the acre were grown on fall-plowed land above that grown on spring-plowed land. No crop responds to a thoroughly well-prepared seed bed as readily as barley, and any farmer can materially increase his average yield to the acre by carefully preparing the soil to receive the spring seeding.

USES

A large portion of the best grades of barley is used for malting purposes, the poorer grades being used as feed for farm animals. A considerable quantity in Europe and America is used for pearling. The various grades of pearled barley are used for making soups, which are relished by many. Two million bushels of barley are used annually in the United States for pearling, while in Europe this amount is greatly exceeded.

In Canada and United States swine and poultry are fed quite generally upon barley, and all feeders attest to its high value as a producer of pork of the finest grade. The use of barley as a food for domestic animals is becoming more popular as the farmers learn its feeding value.

The principle by-products of barley when used for brewing are malt sprouts and brewers' grains. These by-products are fed to dairy cows and other farm animals. The brewers' grains are the barley grains after the soluble dextrin and sugar have been extracted for the purpose of making beer.

These by-products accumulate at breweries in great quantities and can often be purchased for less than the actual fertilizing value contained therein. By judicious feeding and saving of the manure for a fertilizer, a farmer may secure the feeding value practically free.

The digestible nutrients and fertilizing constituents as given in Henry's "Feeds and Feeding" are as follows:

Name of Feed	Dry Matter in 100 Pounds	Digestible Nutrients in 100 Pounds: Protein	Carbohydrates	Ether Extract	Fertilizer Constituents in 1,000 Pounds: Nitrogen	Phosphoric Acid	Potash
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
Barley	89.1	8.7	65.6	1.6	15.1	7.9	4.8
Malt Sprouts	89.8	18.6	37.1	1.7	35.5	14.3	16.3
Brewers' Grains (wet)	24.3	3.9	9.3	1.4	8.9	3.1	0.5
Brewers' Grains (dried)	91.8	15.7	36.3	5.1	36.2	10.3	0.9

The average percentage composition of barley and its by-products is about as follows:

	Water	Ash	Protein	Crude Fiber	Nitrogen Free Extract	Ether Extract	No. of Analysis
Barley	10.9	2.4	12.4	2.7	69.8	1.8	10
Barley meal	11.9	2.6	10.5	6.5	66.3	2.2	3
Barley Screenings	12.2	3.6	12.3	7.3	61.8	2.8	2
Brewers' Grains (wet)	75.7	1.0	5.4	3.8	12.5	1.6	15
Brewers' Grains (dried)	8.2	3.6	19.9	11.0	51.7	5.6	3
Malt Sprouts	10.2	5.7	23.2	10.7	48.5	1.7	4
Straw	8.3	3.8	3.7	42.0	39.5	2.7	

The large yield and ease with which barley can be grown, its excellence shown in rotation as a nurse crop, and the increased use of the same for so many different purposes, warrant the farmer in putting forth more effort in growing this most beautiful crop.

THE FARMER THAT HELPS

"I tell you, he's an awful good man! He never gets mad if I ask him questions, and he knows about everything! He can make whistles that'll make a noise, I tell you!"

This was a boy's estimate of a neighbor farmer. Boys know what they are talking about, and when they say a man is a good farmer, we may well look into it and see on what they base their estimate.

There are a good many good farmers in this world—in their own opinion. They like to be rated high in their calling. Are they entitled to that rating? Not according to my boy friend. They know how to plow and sow and gather into barns, but when it comes to making basswood whistles and talking with young folks they are a miserable failure.

This thing of being good farmers sums itself up in just one word. The good farmer is the one that makes the world better. It is not worth while to add a few bushels of wheat or corn or potatoes to the world's great store if we have not done something to make its sum of knowledge or happiness greater. The boy knows that. The man that has no time to stop and answer questions, such as the boys and girls will surely ask somebody, isn't a very good farmer, no matter how many acres he may own or how big his barns are.

"What made you leave the farm?" a man asked a young fellow that had just come to the city to find work.

"It is so lonesome in the country! Nobody to visit with. Just got to sit there all the evening without saying a word. Work all day and sit around somewhere till bedtime. I got sick of it."

Now, if that young man had had a home where there was a homy atmosphere, it would have been different with him. Perhaps he might have been saved for the farm. Books, papers, games, something to talk about, some one to answer questions patiently, that would have made farm life pleasanter and more endurable.

The farmer that helps, who is he? He is the one that inspires those about him to try to learn all there is to be learned and get more out of life than the man or woman that went on yesterday did. Of course, no farmer can answer some questions boys ask. They are master hands at the art of cross-examination. But all of us can find out. That means work and study on our part? Good!

I have in mind a farm mother that has gone hand in hand with her boys right through ever study which has come to them in school. Arithmetic, grammar, history, Latin, geometry and English—everything—she has steadily gone with her boys through them all. It has been a blessing and an inspiration to the boys and it has kept her young. Just now that father and mother are digging out again the old battles of "Cæsar de Belli Gallico." You do not need to tell me that the boy that has such help as that at home will care much for somebody else's home. His home is the best on earth in his opinion.

We farmer folks are to blame for a good share of the discontent among our children. We get so busy with our farm work that we have no time to live down where the boys and girls are. The farmers that help this world are those that put heart into everything they do. Cold-blooded farming for the money there is in it is not the thing. Life, life, fellow-farmers, is the thing that will make it worth while for us to spend our years here.

E. L. VINCENT.

GETTING DOWN TO FIRST PRINCIPLES

For many years there has been an unceasing flow of country people to the cities, but it begins to appear like the ebb was setting in. I have quite a number of letters from people who earnestly desire to get back to the land. Several of them tell me they were raised on farms, and

Characteristic heads of Select Oderbrucker barley. Attachment of kernels to the rachis shown on left

went to the city to seek fortunes, but up to the present time have not found any. Now they are seeking to obtain small tracts of land near some fair-sized town and try to win a living from the soil.

RETURNING TO THE COUNTRY

If the return of these people to the land checks the rush of young people to the cities it will be a good thing for the country. A few short months ago the cities were calling for workers, and it was an easy task to secure employment as soon as one arrived, and it seemed as though the cities were going to absorb the entire working force from country and village. Now hundreds and thousands of these young people are back, and seeking to reinstate themselves in their old homes, where they were doing comparatively well before the city craze struck them. The city does not want them now. When the panic frightened capital, the rush of business, manufacturing, building and improving ceased, and workers were turned off by the thousands.

A few days ago I counted the number of people that had left our village for the city during the past eighteen months, and there were thirty-two. Of these, twenty-seven have returned since the "depression" began. Several of them are awaiting the resumption of prosperity to return to their work, expecting, of course, to receive the same wage as before. They may have to wait some time. Others are adjusting themselves to the changed conditions and are "accepting" situations wherever open. This is the most sensible course. This is a presidential election year, we must remember, and there is certain to be more or less hesitation in business, and capital will be slow about inaugurating new enterprises and extending old ones until the political situation clears up. I would advise all of these young people to take hold of the first work offered, even if it is something they have no particular liking for. Any kind of work is better than idly rusting and wasting one's best days.

GETTING A START

Many a man who has spent the best years of his life in the city has finally left it for the country, or the suburbs of the larger towns, bought a small tract of land and made a living from it. Some have made the attempt and failed. Success or failure lies in the man and his family. To make a success one must get right down, as a man once told me, to first principles. He must either know or quickly learn how to economize to the best advantage, and he must always be ready to turn his hand to anything that will bring in a dime.

A man who is now in very comfortable circumstances informed me that the first two years of his attempt to wring a living from the soil the principal part of his living was mush and milk. He said he had some bread, butter and meat, and, after the first year, plenty of vegetables, but corn-meal mush and milk was his chief diet. But he won out, finished paying for his place, and while doing it, learned lessons of untold value to him.

Some people will think that a mush-and-milk diet is a little thin for a working man. It is as an exclusive diet. But it can be supplemented with quite a number of other cheap and nourishing articles that are good. I was once compelled by circumstances over which I had no control to live fifteen months on mush and milk almost exclusively, but I always managed to come up smiling at meal time. The fact is, I was very much in debt, but was wearing a prosperous face to prevent my creditors from grabbing all I had, and was meeting my obligations on the voluntary instalment plan, and with an air that prevented my creditors from dunning me, and kept me in good standing. I succeeded in liquidating all my obligations without my creditors ever guessing for a moment that I was all the time practically bankrupt. Every penny I made went into the liquidation fund, and as I was always willing to tackle any kind of a job I was generally kept busy. When I think of that time it seems more like a dream than a reality. But it was exceedingly real at the time.

ATTAINING SUCCESS

If the city man who wants to get into the country, or the suburbs of some town, and make a home and a living will get "right down to first principles," as the men who have succeeded did, he will succeed also. I have had so many people ask me about this matter—how they can secure a small home of their own, how make a living, and a hundred other matters—that I wrote a little book explaining the whole matter in detail. It will be advertised in FARM AND FIRESIDE shortly. We have all heard that where there's a will there's a way, and such invariably is the case.

FRED GRUNDY.

NEW SAWS AND FRESH FILINGS FOR FARMERS

The good lay young.

'Tis well to sell well.

When right stay ahead.

All is not egg that cackles.

He farms best who farms most.

All hens are not what they cackle.

Open windows are good for the health.

Feed plenty of hay while the moon shines.

The proof of the cackle lies in the gathering of the eggs.

The farmer's "middle of the road" is the middle of the field.

Horses are like women, in that their "neighs" often mean yes.

A farmer should know how to do everything, or know how to have it done.

That time is well spent which is devoted to seeing that money is well spent.

The world never gets a chance to owe some men a living—they keep it collected up to date.

You cannot always tell by the rattle of the mouth the length and speed of the train of thought.

Speaking about the fashion—there is no danger of the blue overalls and calico dresses going out of style.

The five senses of man are satisfied on the farm; fruits of the field and garden for the palate, perfumes of God's fresh air and flowers for the nose, the petting of the stock for the touch, the beauty of the land for the eye and the music of the barn yard for the ear.

A WISE FARMER

There was a farmer who did subscribe
For a paper called FARM AND FIRESIDE;
Then he did his work so well,
The neighbors could easily tell
That in farming he took a higher pride.

WILLIAM J. BURTSCHER.

TWO PICTURES

I.

The house stood not far back from the road; an orchard, in which the pigs were pastured and fed, came up flush with the front yard on one side and the barn yard was on the other. The windmill stood forward to the right, its steel legs sticking down in the scraggy lawn. There were evidences of work in the implements strewn about the premises—the reaper and a light wagon were weathering by the fence; a sheep was penned in one corner of the yard. These were signs of that by which the family had its living—the tools, the fruit, the farm animals, the grain. They were the things the eyes rested upon if the family came to the front door to look out. They were the tokens, too, by which strangers estimated the character and aims of the proprietor. Back of the barn, it is true, there was an unusually attractive landscape with a ribbon of silver river strung along the foot of bluffy hills, but the barn loomed up close and hid all this.

It is said of a certain Englishman that when he came to die he asked that this inscription might be placed on his tombstone: "Born a man; died a grocer." These farm premises seemed to have a similar inscription engraved on their face. They read, "Born a man; lived a farmer."

It is so plain that he who runs may read—as easily as he may read the patent-medicine ads on this man's barn and fences. Born with all the faculties and opportunities for leading something more than a mere animal existence, it is easy to be seen that here the man and his family simply farm. Here, likewise, the cows get their living, and so do the horses and swine; here grow the fruits, the grain and the garden truck. Evidently the sole business of the place is "to get one's living." But what about that other kind of "living" here? How do the children feel about this house and its surroundings? Is it "home" in their thoughts, the spot of pride to them, the place strangers admire in their presence? Where are the swings, the tennis court or croquet ground for them and their mates to frolic with? Is there provision for these things? Oh, no; it is just a place to work and eat and sleep in. Manhood and womanhood are not planned to be nursed here. These people are "farmers." That covers the circle of their existence. Social relations, citizenship and whatever meager culture comes to them through necessary associations with others are merely incidental factors. Such considerations are not essential, and certainly do not master and dictate the farm operations.

II.

One summer morning at sunrise a long through train on its way to the Northland paused to let me step off at the platform of a flag station. A horse and buggy stood in waiting, and when I was seated, the driver turned into the deep sand road that wound around and up the steep hillsides, at the foot of which ran the railroad. Up and up to the rim of the valley, and here, on the verge of it, we stopped before a sight that fairly spoke aloud, so full of significance did it seem. An open, ample lawn spread before us, set irregularly with a few choice trees transplanted for the purpose and others that had been left when the wilderness was cleared away.

In this green sward, well enough back to give breathing room and beauty of setting, stood the house of my host. It was not large, nor modern—it was even a log house. At one side stood the windmill with a well house enclosed in the derrick. Considerably at one side and somewhat back was the barn, with the stock yard to its rear. Back of the house and at the sides were the orchard and cultivated fields. In front the valley dropped down and receded to its far sides in purple depths and distances, while to the north, miles away, the waters of a highland lake sparkled in the August sunshine. Here was a "home." You knew it instantly. No need to go inside to tell that there you would find comfortable chairs near a table strewn with books, games and papers; that pictures hung on the walls and an organ stood open; that good cheer and mirth abounded, and that there work and recreation were shared unitedly by the members of the household.

These people "lived" here. For this fact the farm and all its operations were instituted. The life of the family, its comforts, enjoyments and its intercourse with the neighborhood were the ends for which these people worked.

Every passerby must have felt this, consciously or otherwise. The ivy that climbed over the log sides of this home proclaimed it; so did the lilac bush and the ball ground for sports, as much as the muslin curtains which hung at the windows and the warm clasp of the mother's hand, the daughter's welcoming smile and the father's hearty greeting. These are the children here, who will not leave home because of its drudgery; they are the ones who will always carry with them the memory of the romps, and home hilarity and the smell of the roses and the drift of the summer clouds overhead so long as life shall last, wooing them back, by subtle means, to ways of integrity and courage when the times of stress and temptation come—as come they do to every child older grown.

Jennie Buell.

◈

COBURN ON ALFALFA

F. D. Coburn is the man who would rather be secretary of the state of Kansas than United States Senator. He had come from Kansas to Rochester, New York, to tell the state breeders some of the wonders of alfalfa and alfalfa growing. He is not to be blamed for being enthusiastic over alfalfa, for alfalfa surely deserves all the enthusiasm it has ever inspired in this state. And it ought to inspire more. The fact is that not one tenth part of the alfalfa is now being grown in New York and many other states that farmers would find profitable to grow. It is one of the crops, perhaps *the* crop, that we must look to for getting our supplies of protein in the cheapest and most available form.

PICTURE I.—WHERE THE PEOPLE "FARMED"

Undoubtedly Mr. Coburn is right when he says that almost any land in the state that is well drained is adapted to alfalfa growing. Of course, the land should be fairly fertile and clean, and then well prepared. Alfalfa while young needs some nursing, but will take care of itself after that and pay well for the first trouble taken with it for a half dozen or more years.

While clover as a regular thing gives but one crop a year, alfalfa yields three, and sometimes four and five, cuttings of better feed than clover hay ever was. An acre of alfalfa will produce three times as much protein as an acre of common clover, and nine times as much as an acre of timothy.

Mr. Coburn gives his alfalfa fields a thorough harrowing in spring, either with the disk harrow (set rather straight) or with a spike-tooth smoothing harrow. If the crowns of the plants, by this manipulation are split across, all the better.

PICTURE II.—WHERE THE PEOPLE "LIVED"

August sceding on land prepared as for wheat has given him the best results.

Some difficulties may be encountered in the more humid climate of the Eastern states in properly curing alfalfa for hay. However, it can be put in cocks while quite green, and thus cured. Hay caps will prove to be a good investment for the alfalfa grower. Pains should be taken to preserve the leaves, as they contain as much protein, weight for weight, as bran. But even the blackened and apparently moldy portions of the interior of the cocks or a stack are eaten by stock with evident relish.

A good share of the Kansas product is ground into "alfalfa meal" and shipped east. It really seems that alfalfa deserves much more attention than it receives. It is a veritable gold mine. T. Greiner.

Farm Management

DEVELOPING AND NAMING A FARM

A reader in Logan, Utah, writes that he is to establish a home in Idaho on forty acres of unimproved land, in order that he may arrange the buildings and lay out the farm to suit him.

This man is attacking one of the most important problems in the economical management of a farm, and attacking it at the right point, where it is possible to make his study count for most. It is much easier to lay out a set of new buildings in such a way that they will be convenient and attractive than to remodel old ones which have been badly planned. He can hardly devote too much time and thought to the problem, for with the best of effort some mistakes are likely to be made. Not all contingencies can be foreseen and provided for. He says that in traveling over the country he has noticed that very few places are laid out systematically; that far more farmers build here, there and everywhere, neither looking for beauty nor convenience.

How true this is! Look over your own farm and see how many things you can count up which are inconvenient. How many of them could be remedied with little expense? We put up with many inconveniences because of lack of capital to provide what we want. We put up with many more because of lack of forethought or energy to remedy them. This is especially true of the little things about the farm. I can look out of the window and see a gate which is fastened up with a wire. This wire has to be unwound and pulled out from between the meshes of the fence each time the gate is opened. As the gate leads into a hog yard which has to be entered only occasionally, the inconvenience is not so serious, but probably more than enough time has already been spent unwinding and winding up that wire to have provided a convenient fastener of some kind. In the hen house I have been raising the curtain window with a pulley and rope and tying the rope around a wire as high as I could reach, to hold the curtain up. When another curtain was hung, a staple and hook picked up among the nail boxes formed a way of fastening the curtain up in an instant with no expense and less trouble than to arrange the rope and pulley. The other will soon be changed.

At Morningside Farm we have two basement barns. One of these was remodeled from an old barn of a size very common in the old days, twenty-six by thirty-six. This is so small that there is barely room for two rows of cows in the basement, running the long way. There is no room for a stairway leading to the main barn floor. At present the separator is on this floor, which adds to the travel which would naturally occur, and each time a person wishes to go from the basement to this floor he must go out the door at the front, walk up around the barn and around the stone silo at the corner, entering at the large door on the back side. This means a great deal of travel in a year. At ordinary times it is not so bad, but when windy or stormy it is often decidedly unpleasant. Here is a condition not easily remedied now, though perhaps it can be improved. If instead of remodeling the old barn I had discarded it entirely, except in so far as timbers might have been worked in in new places, the remedy would have been easy. In the other barn a stairway leads up from the entrance door most used, landing directly in front of the granary door above. I notice that at this barn it is very rarely that any one passes outside and around, as must be done in the other case.

The silo is adjacent to one corner of the smaller barn, and here another mistake is apparent. Space enough is left between the silo and the barn for a chute for putting down the silage. The bottom of this chute was made level with the bottom of the lower floor of the silo instead of level with the barn floor. This makes a rise of from two to three feet to get into the chute. This is enough to make it very inconvenient for one man alone to shovel up the silage and carry it to the cows. As a result, two usually do the work together, the one standing idle while the other is either shoveling the silage up or carrying it to the cows.

These illustrations serve as examples of what is taking place on most farms in greater or less degree. They show that this man is taking a wise course in attempting to study such problems at the beginning, and to so locate his buildings as to economize labor wherever possible.

He is wise, too, in keeping the features of beauty and pleasure in mind as well as those of economy and profit. I deem the farmer fortunate in having his home and his business together. In developing a business he can at the same time be making a home, with all that this word means. Very few farms show any thought on this subject. In this part of the country a common arrangement of buildings is to have the barn on the opposite side of the highway from the house. This means that the most prominent object in the view from the best rooms of the house, or at least from the front rooms, is the barn. A particularly glaring example of this kind came to my notice recently. This was on a farm touching a beautiful little lake. The dwelling itself was neat and well kept, located in a position to command a fine view of the lake. An attractive name was lettered over the entrance, and the family made a point of keeping summer boarders. With all this, an old, unattractive barn stood directly in front of the house, shutting off much of the most desirable part of the view of the lake. Examples of a similar nature may be seen everywhere. Indeed, it is the exception to find a farm dwelling located and arranged with any special reference to the beauty of the place.

The point about which this reader asks in particular is in regard to naming the farm. He says that his own name is one which is so common that it will not be distinctive enough. This, too, is a good idea. The naming of farms has become so common in these days that it does not have the same significance that it once had, perhaps; but there is a distinct advantage in doing it, nevertheless. This is one of the ways of doing farm advertising, and a good one. If the name chosen is an appropriate and attractive one, and is used commonly in connection with all the farm business, it creates a favorable impression and helps to attract attention and customers. There is little advantage in giving the farm a name unless it is used. Let the name be one which will inspire the owner to bring everything connected with the place up to the standard which the name suggests. In time this will have its effect. The name "Excelsior Farm," which is suggested in this case, is particularly good from this point of view. The party says that he wants everything about the place of the best, and this name will afford a constant stimulus to make them so.

Fred W. Card.

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Low steel wheels; wide tires and durability and good service written all over it. Don't be talked into buying an inferior. Get the wagon that lasts. Or we'll sell you a set of Electric Steel Wheels and make your old wagon new at slight expense. Spokes united with the hub; absolutely impossible to work loose. Sold on a money-back guarantee. Their saving in time, labor, horse flesh and repair bills will pay for them in a single year. More than a million and a quarter in use. All we ask is a chance to tell you more about them. Drop us a line, we'll do the rest. Catalog free.

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The Brown Fence & Wire Co.
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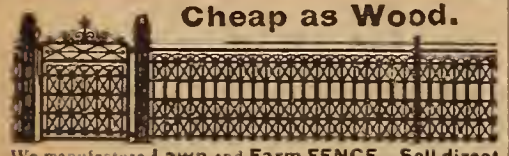

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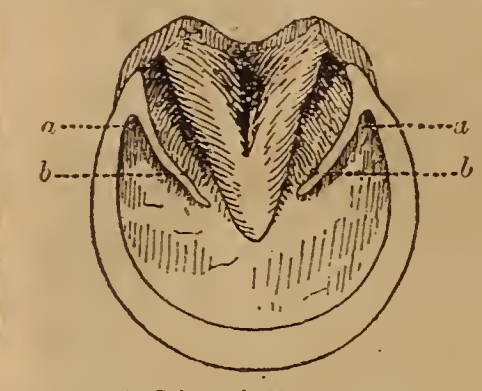
Review of the Farm Press

CORNS AND THEIR TREATMENT

BRUISES of the structures underlying the sole of the angle formed by the bar and wall of the hoof are termed corns. The sole horn is very thin at this part, and therefore is less able to protect the sensitive structures underneath against injury from pressure of the shoe or other violence. The bruise is evidenced by the blood staining, softness and sponginess of the horn of the part, which will be moist or may even discharge matter if the bruise has been a severe one.

It is only in rare instances that corns are found on the hind feet, which have seldom the flat conformation of the fore feet. The heels are stronger, the soles are more arched and the wall is therefore better able to support the shoe without



a, b—Points where corns appear

the necessity of allowing it to rest partly on the bars. The inner heels of the fore feet are the most frequent seat of corns, on account mainly of the horn on the inner heel being weaker than that of the outer. The practise of fitting the inner web of the shoe to the wall whereby part of its bearing is on the seat of corns is also responsible in some degree. This practise is adopted presumably to prevent brushing, but it is unnecessary, as in brushing a horse does not touch with the heel, but with the quarter or toe.

SYMPTOMS

The lameness, which consists in a short, stilty, stumbling step, is most apparent on hard roads, and increases with exercise. When at rest the animal has a tendency to "point" the foot, with the heel slightly raised, toe resting on ground and limb

Shod for corns. Three-quarter shoe

bent. If there are corns on both feet there is alternate pointing or frequent change of the pointed foot. Although the lameness is not likely to be mistaken for a navicular disease, it is perhaps well to mention that, unlike navicular lameness, that from corns increases with exercise.

TREATMENT AND PREVENTION

The spongy, bruised horn should be pared away, so as to allow any effusion or matter to be discharged. The spot should then be dressed with balsam, butter of antimony or other antiseptic and hardening agent. It is essential that pressure should be kept off the part, and to ensure this a horse with corns ought to be shod with slippers, the heels of which should not extend beyond the quarters, or if only one heel is affected, then a three-quarter shoe. In case of a corn discharging matter, after paring, the suppurating surface, may be lightly cauterized with a red-hot iron, and afterward treated with pine tar, quicklime, carbolic powder or other antiseptic dressing. The parts should be kept dry, and on no account should "stoppings" of cow manure, clay or other softening material be used.—S. S. Cameron in The American Cultivator.

PERSISTENCE IN ESTABLISHING ALFALFA

On certain soils in the corn belt alfalfa produces a thrifty growth from first seeding, but in many cases the first crop grows somewhat sickly, and if not plowed under finally dies. In many cases of this kind the grower gives up the battle, thinking that his land is not adapted to the growth of this crop. Now an experience of this kind is not an indication that a soil will not produce good alfalfa. There might be one or two factors operating to make the crop grow weakly or kill it out altogether. In the first place, land that has never produced alfalfa may be almost entirely lacking in bacteria—that is, the organisms that live on the roots of this crop and contribute apparently to its healthy growth. If this is the trouble, and this alone, the same land should be reseeded after the first weak crop is plowed under. This is advised, because these organisms seem to gradually increase from the time the alfalfa seed is first sown.

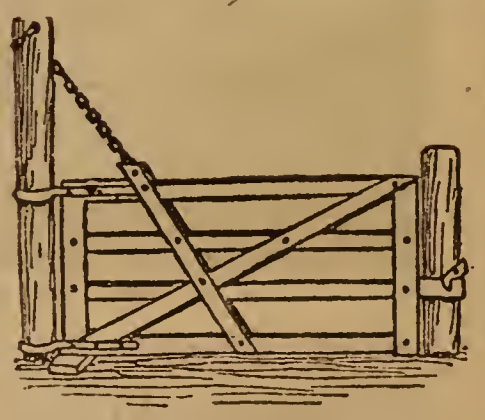
Another condition that is not specially favorable to the growth of alfalfa in the beginning is when the soil is somewhat hard or waxy in its nature. This is especially true when the subsoil is of this character. Now, it frequently happens, under such circumstances, that plants will develop and send down roots three or four feet, but when that stage is reached the crop begins to turn a sickly yellow, and if it is not plowed under it will probably die out altogether.

In such a case it is usually advisable to plow the land; but bear in mind that the roots of these delicate plants may have done something by way of fitting the soil for the crop later on. Upon their decay they render the soil more porous, and therefore make it much better adapted to the production of vigorous alfalfa roots. This being true, it is not uncommon to find instances where the first crop on a given field utterly fails after one has been patient with it two or three years, and yet the second effort to establish a stand is crowned with absolute success.

There is a very large part of corn-belt land that is a little bit close in texture for the full development of alfalfa roots, and for that reason it must be humored a little, and there is nothing better to humor it with than to make a trial with alfalfa itself. Of course the seed is dear, it is true, and no man cares to experiment on a large scale with a crop that he knows is not going to bring in a profit. Alfalfa is so valuable, however, when it is once established that men who have grown it to any considerable extent claim that it is quite worth while to try the second time if a stand is not gotten in the first instance.—The Homestead.

A HANDY GATE

An Illinois reader sends us a sketch of a handy gate, and he says: "I send you a sketch of a gate I have had in use on my place for a number of years, and I find it is never left open if it is properly constructed. The gate is hung on peculiar hinges, that consist of iron bands that work easily on a smooth post. These can be made from an old wagon or buggy tire. The braces are bolted on, as will be seen by the illustration, from the short one of which extends a piece of cable chain long enough to reach to the top of the gate post, which is three or four feet higher than the jamb post. The chain is wound around the post as shown in the illustration, and when the gate is



GATE IN USE ON AN ILLINOIS FARM

opened it winds still further around the post, raising the gate about eight inches. When it is released it will close of its own weight. Whoever builds a gate on this plan will not be bothered with gates in snow drifts.—Iowa State Register and Farmer.

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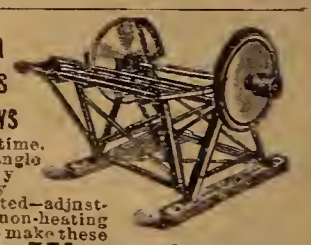

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Review of the Farm Press

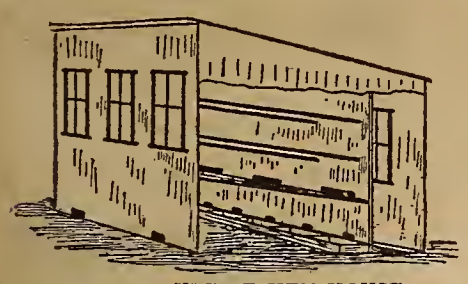
A CONVENIENT AND SANITARY HEN HOUSE

Lack of cleanliness in hen house or yard is the cause of many ills that befall the poultryman. With this cause eliminated, the difficulties that lie in the way of success in the poultry business are nearly all removed. A type of hen house that brings this happy condition about, a hen house that is used extensively by the leading poultrymen of Oregon and California, and a hen house that is both sanitary and convenient, is that shown by the accompanying sketch.

On the larger poultry farms these hen houses are arranged in a line, set end to end, with separate yards in front. This reduces the work of cleaning, gathering eggs and replacing straw in the nest boxes to the lowest possible minimum. These houses may be of any length desired, but are only twelve feet wide and ten feet high.

The accompanying illustration shows a portion of the end removed, revealing the convenient arrangement of the interior. As is shown, a narrow hallway runs along the lower side of the house. Through this hallway a wheelbarrow or cart is run twice or three times each week, and the droppings and refuse cleaned up. This hallway is divided from the main part of the hen house by an inner wall. This gives the fowls greater seclusion and prevents their being disturbed when the house is being cleaned. A sloping platform is built beneath the roosts, and cleaning is easily and readily done by brushing or raking down droppings through a narrow door set in the wall at the lower end of the platform. For this purpose a special rake made of wood is used. There are a number of these narrow doors, set at convenient intervals along the wall. The wheelbarrow or cart is run up under each door and the refuse raked in.

Below the sloping platform, near the ground, and close against the inner wall,



A GOOD TYPE OF HEN HOUSE

is the row of nest boxes. Just over each nest is a little door that is conveniently opened to gather the eggs. This is another arrangement that adds to the seclusion of the fowls, and is especially good in preventing disturbance to sitting hens. On the dirt floor beneath the platform and in front of the boxes are the dust heaps.

These houses are built, when possible, with the front toward the south. With wide windows in front, they are very light and airy. The roosts, platform and walls are whitewashed frequently, and with frequent cleaning these houses are as neat, clean and free of vermin as any house can be. Fowls that are quartered in houses of this type are not infested with lice, are always healthy and in fine condition.

Feeding is done in the runway or yard in front of the house. In countries where there is considerable rain it is well to gravel the runways, to prevent an accumulation of mud. A splendid feature of hen houses of this type, aside from their cleanliness, is their simplicity and cheapness. They are practicable not only for the big poultryman, but for the man who keeps only a dozen fowls.—D. H. Stovall in The Farm Press.

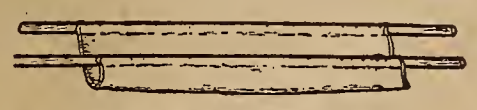
◈

RAISING A HERD

The advisability of raising one s own herd is being considered by some of the larger dairy companies, and the answer is in the affirmative. The expense of raising calves is great with the increased price of feeds. Even though the period of feeding skim milk from the creamery is prolonged as much as possible, the cost of the raised cow will be greater than the value of the cow bought at maturity. It is now believed to be more profitable to use solid feeds for calves as soon as they are able to digest them, giving the skim milk to chickens. Skim milk is cheaper than bought chicken feed and will produce as many or more eggs, according to some authorities.

The advantage of raising one's own milch cows is from the fact that by so doing the owner is sure of their parentage, their lineage and their inheritance. Raised under sanitary surroundings, from healthy, tuberculin-tested cows, the calves will be known to be free from tuberculosis or other contagious disease.

Buying in open market is a speculation, even though the integrity of the seller is above suspicion. Many cows will give evidence of tuberculous infection only by the tuberculin reaction, and some cows, previously well cared for, may become infected while being exhibited at the fairs. The fact that a dairyman can be sure of the quality of



DEVICE FOR CARRYING HAY

his stock is sufficient reason for raising his entire herd, without consideration being taken of the fancy prices commanded by cows guaranteed to be healthy.—Dr. Harold B. Wood in The Jersey Bulletin.

◈

HAY CARRIER

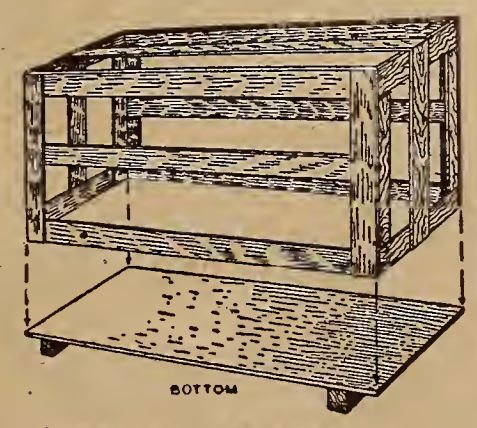
Those who are compelled to carry hay or straw from ricks or mows some distance to feed racks will find the accompanying hint to their aid. It consists simply of two long, light poles tacked to the longest sides of a stout piece of canvas, as is shown. This makes a big sack, as it were, when the handles are brought together over the load of straw or hay contained in the canvas. Gunny sacking serves just as well as the material mentioned. While the illustration shows a device that requires two persons to handle, it can be made so that one can handle it, by shortening the poles and making the width of canvas between them greater, so that one can grasp the poles at the ends and throw the whole bundle over the back.—Farm Gazette.

◈

CRATE FOR HANDLING HOGS

The accompanying illustration is a hog crate that I have used on my farm for years. It should be made as light and strong as possible, two-by-two-inch posts and one-by-four-inch white pine strips being used. The most useful size is fifty-four inches long, thirty inches high and sixteen inches wide, inside measurements. The bottom is made one inch smaller each way than the inside measurement, in order to allow the crate to slip down over it. Two pieces of half-inch gas pipe twenty-four inches long can then be slipped through the holes in the lower side pieces, which will hold the bottom up and also serve as handles when lifting it.

After the crate is finished, keep it in the yard where the hogs will get used to it, and when you want to pick out a hog, place the bottom of the crate where it will be handy, then pick up the crate, with the right hand holding the upper crosspiece, and the left hand holding a side slat near the opposite end, and after you have the "Sing of it," approach the hog from the

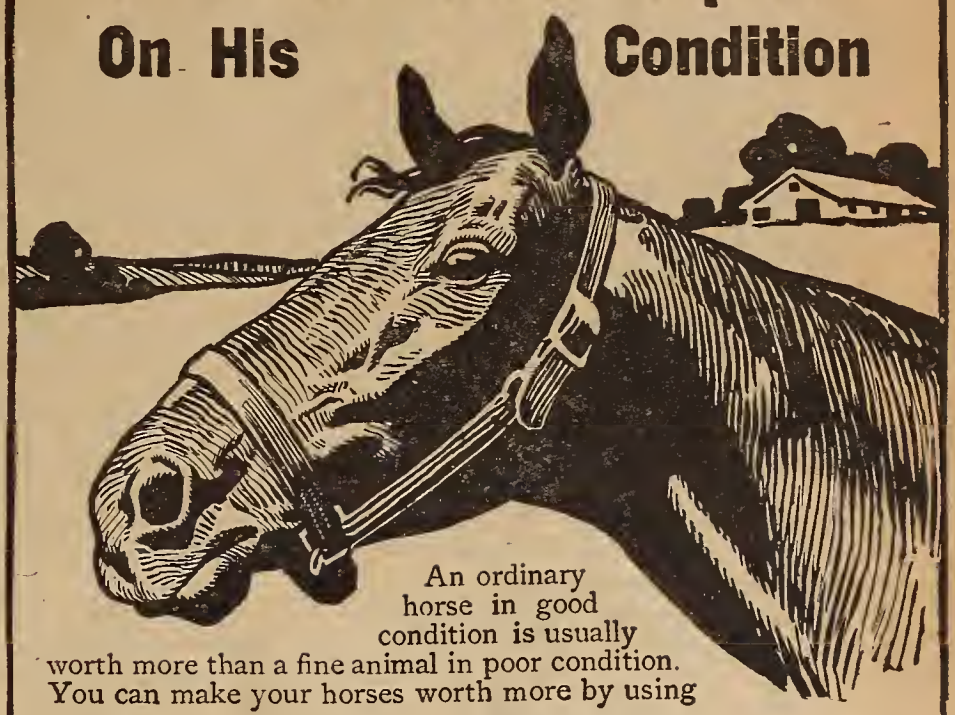


A USEFUL ARTICLE IN THE HOG LOT

rear and a little to the left side and pitch the crate lengthwise over him, letting go with the left hand, that the front end may strike the earth first.

Hold fast with the right hand and pull the crate backward, and you will find that you can in this manner take the hog anywhere you choose. Do not speak, and keep out of sight of the hog as much as possible. Do not try to hold the crate still or to back him on the bottom of the crate until he quiets down a little. You will be surprised to see how quiet he will become after he has walked backward a few rods. To put him into another crate or through a door, raise the front end a little and he will go in like a shot.—Twentieth Century Farmer.

A Horse's Value Depends On His Condition



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Gardening

BY T. GREINER

LIME FOR THE GARDEN

"Do you recommend an application of lime to soil which packs? Must the lime be slaked? What quantity shall be applied, and when?" This is a query often addressed to me.

I do occasionally use a little lime in my garden, in most cases air slaked. This does not mean that I consider air-slaked (practically dead) lime better for the purpose than freshly water-slaked or merely pulverized stone lime. It rather means that I often have some lime on hand which has become air slaked by exposure, or as natural in the course of time, and for which I have no use other than to put on the land.

But if I had a garden "where the soil packs," I do not think that I would expect lime alone to make it porous and loose. My main reliance in such a case is bulky manure, either from my stables or from the stock yards. Plenty of that mixed with the soil by plowing and harrowing and cultivating will make the latter loose and easily tilled. Then, after a few years' manuring in this way, I am ready to try small applications of lime for a change, so as to get all the good possible out of the manure already applied. I simply scatter the lime on the surface. It can be mixed with the soil in due course of cultivation. Its tendency, anyway, is to sink in the soil. Early spring is a good time to put it on.

THE WILSON STRAWBERRY

A reader asks me where plants of the old Wilson strawberry may be secured. This old sort is still grown in my own immediate vicinity to some extent as a market berry. I have a row or part of a row in my own garden, but do not care to plant it more extensively, as some of my neighbors do. The women folks like it for canning. But they like the larger and more productive Brandywine just as much for that purpose.

Why should I grow the unproductive, small Wilson? Some years ago a Michigan grower advertised "pedigree Wilson plants," claiming for them renewed vigor and largely increased productiveness. We planted some of them in these parts, but did not see the renewed vigor or the increased productiveness. So I have not much use for the Wilson except on a small scale for comparison.

Our growers around here grow berries; they do not make a business of growing plants for sale, and I do not think I could get them to accept an order for plants. They are not in the habit of packing and shipping plants, and not equipped for that kind of business. Few plant growers catalogue the Wilson. It will require some hunting through seed and plant catalogues to find it quoted. Some of the older nursery firms may have it.

DRILLING WOOD ASHES

A new subscriber tells me that he is burning mostly wood for fuel, and consequently makes a considerable amount of ashes. He proposes to use them on the oat field, and asks whether it will work to drill them in with the fertilizer drill, and how much he should use to the acre.

I place a high value on wood ashes, both leached and unleached, as a manure for almost all crops, and in many cases I consider them too valuable for common field crops, and prefer to use them mostly for the garden. If unleached, they are mainly a potash manure, and they usually show a marked beneficial effect on such crops as cabbage and cauliflower, onions, celery, beets and many others. In ordinary doses we can also use them safely for potatoes, especially if the soil is a little bit sour; otherwise we run some risk of increasing the tendency to scab.

Oats and other grains, especially on strong soils which are supposed to be liberally supplied with potash already, are usually or often more in need of phosphoric acid, in the form of superphosphate, than of potash. Wood ashes when fresh have only one, or at most two, per cent phosphoric acid, and if to be used for such cereal crops I would also apply a plain superphosphate. This may not be so necessary if the ashes are leached and a double or treble dose can be put on. The leaching process removes most of the potash from the ashes, and leaves a good share of the phosphoric acid.

It is a good plan, too, to scatter the ashes, leached or unleached, on the clover field, where this manure will also prove most valuable, and leave the ground in A No. 1 shape for a succeeding crop of corn, oats, wheat, potatoes, small fruits or garden vegetables.

I usually scatter all the ashes I can get hold of over my garden patches as fast as they are made, or if they have accumulated, from the wagon or wheelbarrow with the shovel, making a light application and spreading as evenly as possible. But when you have tons of ashes to apply (as unfortunately I have not) they may be most evenly put on by means of a common fertilizer drill, such as is attached to a grain drill. The ashes should be sifted, to screen out the coarser particles, cinders, etc., and reasonably dry. At any rate, save and use all the wood ashes you can get hold of. A ton or two may be applied to an acre without hesitation as a general-purpose manure, and two or three times that quantity if leached.

LIME-SULPHUR WASH

A reader finds San Jose scale on his berry and currant bushes, and having heard of the lime-sulphur wash for that scale, has attempted to make that preparation by mixing water, lime and sulphur. But the sulphur will not dissolve in water, and he is at a loss how to proceed.

If one has a big iron kettle in which the mixture can be kept boiling outdoors for an hour or two, it is possible to make this scale wash even on a small scale for garden use. But it is a particular and a somewhat disagreeable job, and even when made it takes a good spraying outfit to do a good job of spraying. I would not advise the average home gardener to attempt making this wash. If a fruit-growing neighbor makes and uses this mixture, you may be able to procure a small quantity from him, or get him to do your little spraying for you for a consideration.

Currant bushes are especially subject to the attacks of the pernicious scale. If left unattended, the bushes will surely be destroyed clear to the roots. You will lose the following season's crop, and can think yourself well off if you get a new crop of canes that remain free from scale and will give you a crop of fruit the year following. Timely spraying will save the canes and the fruit crop; but summer or early fall spraying may also be necessary. I spray these bushes every year with crude petroleum. A ten or twelve per cent solution of scalecide or other soluble oil will probably destroy the scale. But the applications must be made promptly and thoroughly. Almost any of the smaller sprayers intended for garden use, especially the knapsack, may be used for spraying these oil mixtures.

DON'T HANG ON THE FENCE

Because you have only a little "patch."
And a tiny handful of seeds,
Don't hang o'er the fence and slight your work,
While your garden is growing to weeds,
Bemoaning your "luck," and your acres one,
While your neighbor counts by the score;
If you won't take care of that one small patch,
You'd fail with a thousand more.

Because you must stay in your own back yard
And count your money by pence,
Don't spend your time and your temper spoil
By hanging over the fence,
And wishing for only a million or two
In gold, or in stocks, or in banks;
The man who whines, whatever his lot,
For a million would give no thanks.

If your only coat is of fustian coarse
And you push but a humble wheel,
Don't hang o'er the fence and envy the man
Who rides in an automobile:
If you are not thankful for health and strength,
And the "dinner of herbs," your own,
You'd kick if you rode in a coach and four,
And you'd grumble upon a throne.

If you want to get out of your own small yard,
Then work with a will while you wait;
You'll find that fortune's a matron staid,
Who never unlocks the gate
To a man so small that he cannot prove
His worth in aught else but cents,
Or who wastes his time, and his manhood, too,
By hanging over the fence.

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Fruit Growing

BY SAMUEL B. GREEN

PEDIGREE STRAWBERRY PLANTS

IN ORDER to have a pedigree, plants must be grown from seeds, and in order to have a known pedigree—that is, "a registry of a line of ancestors"—they must be grown by intention, not by accident. The most of our popular varieties of strawberries are chance seedlings. They have no known pedigree, nor can they by any possibility acquire one, for their parentage is unknown, and must forever remain so. Thus we see that the word pedigree cannot properly be applied to strawberry plants grown from other plants, and hence there are no pedigree plants in the sense in which the expression is popularly used at the present day. The word "thoroughbred" used in a similar sense is also a misnomer.

PLANT BREEDERS

The growers of so-called pedigree plants are propagators, not breeders. The author writes a book; the printer increases the number of copies, but this does not make him an author. A true plant breeder is a grower who takes advantage of hereditary tendencies and endeavors to perpetuate points of excellence and combine desirable characteristics by producing plants from seed. He continues this process from generation to generation, and if he keeps a record of the parentage, his productions have a known pedigree. Plants grown by this method are real pedigree plants.

Professor Sandsten, the plant breeder of Wisconsin Agricultural College, says that there can be no plant breeding without seed.

BUD VARIATION

Next comes the question, Is there then no such thing as bud variation? There is, but it is temporary. It is found in fruit-bearing plants, vegetables and flowers; but it is due to conditions, and cannot be made permanent. The idea that a variety can be improved by selecting buds from the most perfect specimens for propagation seems so plausible at first thought that almost any one might consider it a forward step in the line of progress, but further consideration reveals the fallacy upon which it is founded. The proposition is not new, but dates back nearly or quite a century.

Just here a brief digression from the text may be pardonable for the purpose of illustration. "McMahan's Gardening," published in 1819, advises the selection of apple scions from horizontal branches, as "they come into bearing sooner" than chusetts gives an incident in his own experience which illustrates this point. He had an apple tree of the King variety growing where it received the drainage from the barnyard. It produced enormous apples, but they were coarse and poor keepers. From this tree he had one hundred others grafted, and they all produced King apples of the ordinary type.

To return to the strawberry. A few years ago a variety called the Improved Parker Earle was sent out, purporting to have been derived from the original Parker Earle by selection, but when the two were placed together and given the same treatment they were alike.

A well-known strawberry grower of Iowa wrote me last year that he had propagated the Louis Gauthier for six years with a view to increasing its inclination to bear in the fall, but had gained nothing.

Professor Troop, of the Indiana Experiment Station, wrote last month, in reply to an inquiry: "The pedigreed plants were away the poorest in point of yield this last season. I am going to give them another trial."

The Ohio Experiment Station, in its strawberry bulletin for 1905, gives an article on "Pedigree Strawberry plants," also an account of tests carried on at the station, from both of which I will quote in closing:

"The word 'pedigree' as it is used with reference to strawberry plants is a misnomer. It tends to confusion in the minds of many, and leads to deception. The word is used out of its true sense to convey the belief that a condition exists which does not exist and cannot exist, or if it could exist, would have no value."

◈

THE EXTENSION OF APPLE GROWING BY THE INTRODUCTION OF HARDIER SORTS

Fillmore County, Minnesota, is no better adapted for fruit raising than twenty other counties in that state. A few years ago the shipment of a carload of apples from this county was a subject of considerable comment. In the season of 1907 there were shipped from Fillmore County, seventy-six carloads of apples by one concern. Figuring these at one hundred and sixty barrels to the car, which is about what they average, this would make 12,480 barrels of apples shipped out of Fillmore County last season. If there were added to this the large amount of apples used for local consumption, and some shipped by other parties, there is no doubt but that the total would be close to twenty thousand barrels of apples raised in this one county this year.

RHODE ISLAND ORCHARD SCENE

In 1896, 2,659 barrels of market apples were picked from this orchard of 1,300 trees. Last year about 1,200 barrels were placed in cold storage. The good results in this orchard are accredited to liberal spraying and allowing a drove of hogs to run in the orchard the entire year

others. Forty years later the idea was advanced that vertical scions would produce upright-growing trees, and horizontal scions, spreading trees.

Simultaneously with the appearance of the new idea in regard to improving strawberries by selection came the theory that scions taken from trees with certain desirable traits would perpetuate those traits in other trees into which they were grafted, but there seems to be no proof whatever of its correctness.

It is true that one tree in an orchard may be better than others, even one branch may be more productive or yield handsomer fruit; it is also true that a skilful horticulturist can produce great changes in the habits of trees, but these variations and changes are due to situation, soil, light, food, moisture, treatment, in short to circumstances. They are not constitutional, and cannot be perpetuated in other trees with different environment. An orchardist in Massa-

The varieties shipped were chiefly Duchess of Oldenburg, Patten's Greening, Hibernal, Northwestern Greening and Okahena. These are all extremely hardy sorts and succeed where such varieties as Baldwin, Jonathan, Grimes' Golden, Ben Davis and Winesap fail completely.

The state of Minnesota has recently appropriated sixteen thousand dollars for a fruit-breeding farm, for the special purpose of promoting the introduction of new hardier fruits. This is an important step in agricultural experimentation.

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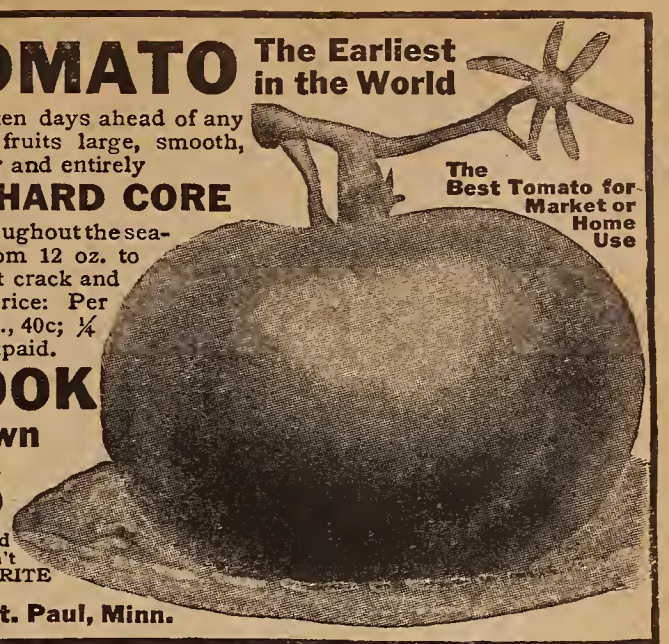

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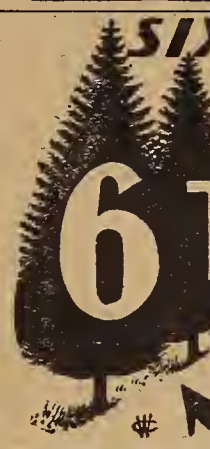

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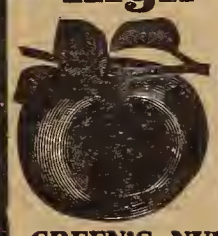

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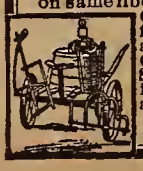

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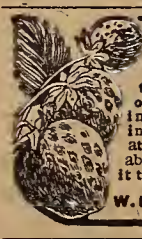

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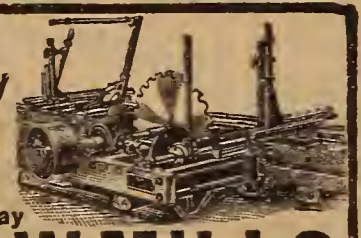

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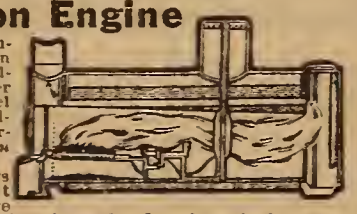

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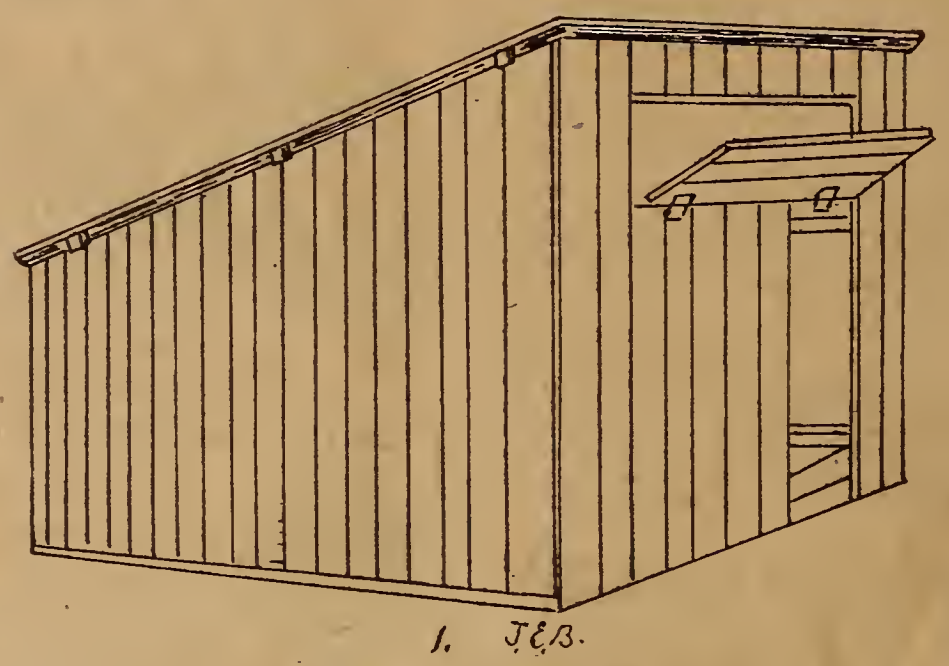
Live Stock and Dairy

A PORTABLE HOG HOUSE

Properly located and constructed hog houses or shelters are essential to success in swine husbandry in all regions. The advantage of a portable house over the piggery system of several pens and a large number of hogs under one roof is its ease of management in times of epidemic. Only a few animals are kept in one pen, and the isolation of the diseased animals when an outbreak begins is thus rendered comparatively easy. When cholera breaks out in a crowded piggery every animal in the building is exposed, and the farmer, though he may isolate the unaffected animals at once, does not know how soon the second outbreak will occur; he has no check whatever on the epidemic, but with the portable hog house each house is itself a cholera check, and only infection direct from diseased animals can spread it.



PORTABLE HOG HOUSE SET UP

Of the many kinds of portable houses that are built, the one shown in the illustration has several advantages: It is cheap, can be built by most any one, and in moving, cleaning, etc., it is easily handled, one man being able to load it on a wagon, or it may be placed on skids or runners and moved.

J. E. Bridgman.

A CONSPICUOUS LOSS

The horse when at work has a very brief feeding spell. He gets quicker effects from the noon feed when it is ground, as the digestive apparatus can more readily convert it into blood.

A horse has to have prime digestion and be fed so as to prevent rapid eating if even oats are assimilated instead of passed whole. The fattening steer voids a large per cent of all corn eaten. It is expected, of course, that hogs and fowls are to make use of this grain, so that it is not wasted, but these cannot follow the horses about in their work, nor do not always follow steers about the pasture.

It does not always pay to grind feed; it depends upon circumstances. When one has the machinery for grinding, however, there is little question as to its being a profitable thing to do. One does not always want hogs in the cattle yards or pasture. Sometimes cholera sweeps through the hog herd and at a time when steer feeding is in progress. No one can afford to let that corn go to waste.

It is well for every farm where live stock is kept to be equipped with machinery for grinding, so as to make ground feed whenever wanted.

Wm. H. Underwood.

COMPETITION IN CATTLE RAISING

With a drop from twenty dollars a ton early in the season to the present price of twelve dollars a ton for cotton seed in this section of the South, the problem of cattle feeding during the winter and spring has been solved, practically speaking.

At the prevailing price there is probably no other food that can compete with whole cotton seed to be used for fattening cattle. The farmers have stopped selling them, and where they have to be hauled any distance, they will be kept on the farm and fed until a materially higher price has been reached.

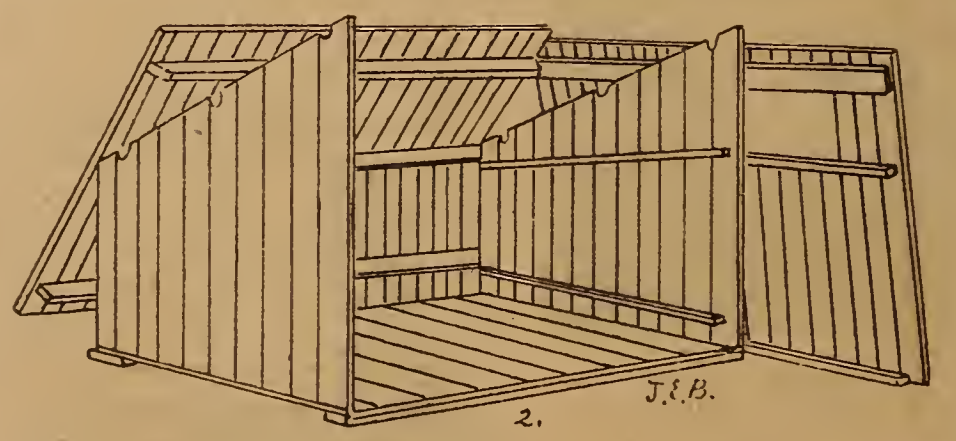
With the advances that have been made in cattle growing in the South during the last few years, both in the dairy industry and beef breeds, a new light is given to the situation with the decline in prices and the extremely high price of grain and forage.

Already there is a sort of an undeclared war existing between the hog-growing sections of the country and the major portion of the cotton belt, and a factional fight is really being waged. The oleomargarine law works to the detriment of the cotton grower, so to speak, and the hog-lard producers are at variance with the cotton-seed growers, as there is now open competition between the two. Many people, of course, prefer the pure vegetable oil to the best lard, as it is absolutely without disease.

Now, with the decline in the price of cotton seed, the competition in cattle growing may rapidly develop. While the South can raise enormous crops of hay, grain and forage, still the hundreds of thousands of tons of seed grown in connection with the cotton furnish a great supply of feed that can be utilized to tremendous advantage in conducting this competition. There will probably be more well-fed cattle and a better condition of animals noted in the South this season than ever before. With the advent of good feeding will come improved farms, through the use of stable and barn-yard manure, and consequently a desire for better breeds of cattle and also for better individuals.

As a result the South may awaken to its vast opportunities and open up one of the greatest cattle-growing regions in the world. With a long growing season and plenty of grazing it can fear but little competition from any section, and with the rapid eradication of all diseases of cattle the way will be easy for firmly establishing the great industry.

Georgia. J. C. McAuliffe.



PORTABLE HOG HOUSE BEING MOVED AND PARTLY SET UP

How the Government Helps the Farmer

Suppose a number of practical farmers experiment for several years and find that a certain method of handling corn fodder is sure to make a considerable increase in its feeding value. Isn't it dollars and cents in the pocket of every other farmer to learn just what they did and how they did it?

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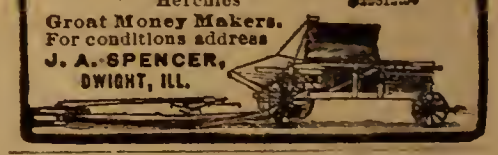

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Live Stock and Dairy

THE CONDENSED-MILK FACTORY

Kahoka, Missouri, is the proud possessor of a condensed-milk factory, which has been in operation three years. It has been found quite a source of profit to the owners, and is also bringing good financial returns to the farmers of the vicinity.

When the factory was first built but few farmers could be interested in the dairy business. During that summer only about four hundred pounds of milk were received each day, and the factory had to close down in the winter because it could not get enough milk to make running profitable. The following year was better, and the present one has been a decided improvement over the last. As many as ninety farmers delivered milk last summer, and from five to eight thousand pounds, or from six hundred to a thousand gallons were received each day. Of course as the winter came on and cows failed in their milk the average fell below this.

The farmers who have delivered milk to the factory claim it pays better and takes less work than to make butter or separate and send the milk to a creamery. The factory is now paying one dollar and thirty cents a hundred pounds for the unseparated milk, which amounts to eleven cents a gallon.

FARMERS DELIVERING MILK AT THE KAHOKA CONDENSED-MILK FACTORY

The milk is brought in early every day, and consists of the previous night's milk with that of the morning. It is delivered in ten-gallon cans, and by nine o'clock nearly all the deliveries have been made. As the milk is turned over to the factory it is poured into a large tank which sets on scales. After being weighed, and the number of pounds jotted down to the credit of the owner, it is run into large copper vats. It is then drawn up into the cylindrical condenser, where it is boiled in a part vacuum until the proper thickness is obtained, when it is transferred to ten-gallon cans and set in a long tank of water to cool.

The factory disposes of the condensed milk as it is after being cooled, or it is sweetened and poured into fifty-gallon barrels. The first preparation is shipped to ice-cream factories in neighboring towns and cities, because it will sour before many days except in extremely cold weather. The barreled milk is shipped by freight to any part of the United States, as it will keep for an indefinite time. In this form it is utilized by the candy factories in such cities as St. Louis, Cleveland, Boston, Brooklyn, Chicago, Milwaukee, Denver and Portland. These factories contract for it by the carload, as they use hundreds of gallons each month.

Up to the present the factory has been unable to supply the demand for the product. It recently refused some large contracts simply because the milk could not be secured to fulfil the requirements. Whenever the farmers can be induced to enlarge their dairy herds so as to supply the milk, the output of the factory will be much larger, as it has the capacity to utilize one hundred thousand pounds of milk each day.

There is no doubt but that many farmers hitherto uninterested will in the near future purchase dairy cows and furnish milk to the factory. Its profitableness is certain when eight or ten cows giving two gallons of milk a head each day will yield the farmer from forty to sixty dollars a month without much labor or expense. A number of the farmers already in the business are delighted with the returns. Some who have always had a hard struggle to get ahead financially have opened bank accounts since going into the dairy business. Of course they have happy hearts and sunny faces, and are always ready to speak a good word for the milk factory.

W. D. NEALE.

OIL MEAL, MIDDLINGS AND CORN VERSUS OATS

One of the best-known members and ex-presidents of the Breeders' Association of this state finds oats too expensive this year to give to his horses during the winter as a regular ration. He is now giving middlings with a little corn meal and oil meal added, and his horses are as high headed as ever. The oil meal costs him thirty-two dollars a ton by the carload.

T. GREINER.

CURE FOR WARTS ON HORSES

Rub the wart well with soft soap and in a few days a scab will appear. Pick the scab off when it gets loose, and rub again with soft soap, repeating the operation until the wart is gone. It will not leave a scar and will not return.

O. P. STEVENSON.

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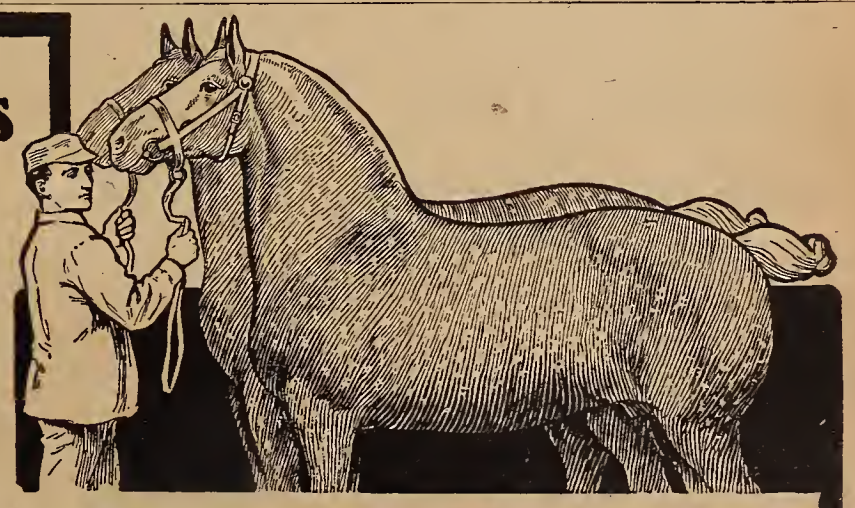
What Horses Need



Conditioning horses for market requires *skill* in feeding. The stomach of the horse is not suited to the consumption of as much rough fodder as is that of the ox. The ration for the horse then, must be more concentrated—largely grains. But food itself is not more important than is a proper *distribution of food* after it's eaten. Thus *digestion* becomes the function to which we look for all satisfactory growth and fattening. Now long-continued heavy feeding may bring stomach derangement, dropsical swellings or even colic. Hence the horse needs a tonic to assist and perfect the digestive process.

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Live Stock and Dairy

SWINE NOTES

Turnips are an excellent feed for the brood sow just before farrowing time.

Keep the youngsters free from lice, as they are not a profitable combination to grow with hogs.

Corn, alfalfa and clover pasture will lay fat on pigs about as fast as anything else that grows.

Only the best-bred pigs which are pushed from the start to the finish make the most money.

When your pigs are running on clover pasture, and you are feeding grain, give it to them at night.

Meal slop is good hog feed, but a little wheat middlings mixed with it makes it very much better.

Slop may make hogs fat, but I prefer bacon that is built from a ration of clean grain and grasses.

Some men say that a cross sow makes the best mother, but it is a statement without any proof.

If you have a vicious sow that kills her pigs, and is generally cross, send her to the shambles.

In finishing fall pigs ground wheat seems an expensive feed, but it will pay when mixed with cornmeal.

Plenty of clean water should be provided every day at noon time, and again in the evening, for the hogs.

A steady diet of corn fed the sow right up to the time of farrowing often causes the pigs to die in the womb.

The hot sun will drive the fat out of a pig about as fast as it can be laid on. It pays to provide plenty of shade.

After the pigs come, feed the sow all she will eat of nutritious rations. A fair amount of corn will not hurt her then.

A light feed of grain may be given pigs three times a day, but twice is better if they have plenty of good pasture.

A cement feeding floor comes pretty high in the first place, but it will pay for itself in a short time in the saving of feed.

A cold rain is very hard on young pigs, and the man who has provided warm, dry quarters for his youngsters can congratulate himself.

R. B. RUSHING.

THE BUSINESS VIEW IN FEEDING

This is the season when mistakes are very likely to be made in feeding. Prices are high, and it seems to be shoveling in money fast to give the stock all they will eat. It is almost impossible not to begrudge the animals some of what they are eating and to hold back a little. Here is where the mistake will occur. Now and then a man with plenty of means, or one who is careless of results, may overfeed. Far more underfeed.

It should never be forgotten that a very large proportion of what the animal consumes is needed as a maintenance ration. This portion must be used to make good the losses incident to life and keep the animal standing still. Some classes of animals, to be sure, only need to be fed this much—idle horses or brood sows being wintered, for instance. With most animals, however, all feed consumed up to this point may be considered as dead loss. It is only when the amount rises above this that any chance for profit exists. Yet how many keep the amount so near this dead line that the margin for profit nearly or quite disappears.

The animal which will consume and utilize to good advantage the largest amount of feed above that needed for maintenance is the most profitable animal, whether a cow giving milk or a pig or steer making meat. Far better, if one's capital or courage will not hold out to give all the stock what they will use to advantage, dispose of part and feed as much to the remainder.

If when fed all it will consume an animal does not show profit, it should be disposed of, and one put in its place which will make better use of its opportunity. It may be that no profit will result from feeding liberally, but it is certain that if none results by that method none can be found by any other.

Too little feed is not the only condition which will prevent profit from animals. If the ration is not well compounded for the object in view, the animal may have all it wants, yet not yield a profit. The fattening hog and the milking cow need very different food. Feed to either the food best adapted to the other and the results will not be good. Even a comparatively well-planned ration which may be yielding a profit may be giving less than another of slightly different composition would give. No feeder should make the mistake of letting the price of individual feeds influence him to the extent that he substitutes one of wrong composition for the one he needs.

Still other conditions may be responsible for loss. Proper housing has much to do with it. Two litters of pigs at Morningside illustrate this well. In cold weather the sows are usually put in a box stall in the basement of the barn to farrow. One litter, or rather two, with two mothers, was placed outside in an individual pen after getting a fair start, to make room for others. A more recent litter has occupied the box stall in the basement ever since birth, never, except for an hour or so, having been out of doors, though often having the run of the basement, and thus getting access to earth. Upon returning from a long absence I found the latter litter doing finely, and they were continuing to grow as fast as one could wish, although they have since been weaned and been obliged to feed for themselves. They are the finest litter we have ever had.

The others, though considerably older, are now much smaller than these. They are still suckling their dams, but stay humped up in their pen, seldom get out to eat much at the trough, then hurry back as quickly as possible. Two have died, and the others are ill-looking specimens indeed.

I found, to my surprise, that this pen was not as well built as I had supposed. Cracks at the back side let the wind blow in. I found, too, that they were not as well bedded as they should have been, and evidently their pen had not been cleaned and kept dry at all times. The cracks were battened, the pen cleaned and the bed looked after, but these little chaps still wear a very discouraged look. I fancy that they would do better if taken away from the sows entirely and put by themselves, which will be the next move.

The point is this: All the feed these pigs have consumed for some weeks past has been absolutely wasted. They are not as good animals as they were when removed from the barn. The sows look well, but improper housing and lack of attention to all details of their comfort has resulted in loss, though enough feed has been given to the mothers to have produced good growth on the part of the pigs. It is points like these which demand such close oversight on the part of the farmer, and which make farm management, using the term in a broad sense, such an important part of the business of farming.

FRED W. CARD.

SHEEP AND LAMBS

Hon. John Campbell's, president of the Ontario Sheep Breeder's Association, talk on sheep husbandry, before the New York Breeders' Association, the other day, reminded me of the proverbial golden hoof of sheep. He believes that with the best markets of the world right at our doors we New York State farmers do not live up to our opportunities. New York City alone consumes one hundred thousand carcasses of mutton a week. Mr. Campbell believes in the profitableness of sheep, and says that no live stock can compare in point of profit with lambs for market.

Mr. Campbell started twenty-six years ago on a worn-out farm. At first he attempted to increase his crops by the free use of commercial fertilizers, and soon found out his mistake. Next he tried feeding cattle, with sheep added. He selected Shropshires, and made up his mind to procure first-class stock only. Second or third class rams may be much cheaper, but they are neither satisfactory nor profitable. Consider the quality, not the number of sheep you may be able to get for a certain sum. That is his advice.

A limited quantity of apples, also rape, turnips and mangels, are the best things to give to breeding ewes; but we should beware of an excess of such food. Musty clover hay should be carefully avoided. Good oats straw is a better and safer food. Carrots and a few potatoes may be given to the ewe in lamb, but no mangels. A week after lambing, beets may be fed safely and with benefit.

Sometimes the first milk fails to go through the lamb. In that case Mr. Campbell gives a teaspoonful of castor oil after the first suck, and the lamb will usually come out all right. For white scours, a few drops of laudanum are mixed with the castor oil.

Cabbage makes an excellent feed for sheep in the fall or early winter. Rape is an excellent fall feed.

T. GREINER.

When Eggs Are Eggs

How do you manage your poultry business? Are you content to gather a moderate supply of eggs in springtime when prices are low, or do you aim to get your greatest number during the winter months when prices are up and "eggs are eggs?" The way to succeed with hens is to do what others *don't* do. When your neighbors' hens are on strike, then see that yours "get busy."

If you will begin *now* to feed Dr. Hess Poultry Pan-a-ce-a your hens will not stop laying at all. Of course the moulting season is an "off time," but even then Poultry Pan-a-ce-a will make a few eggs, and if you continue to give it regularly, you will get an abundance all through the cold winter days when others get none.

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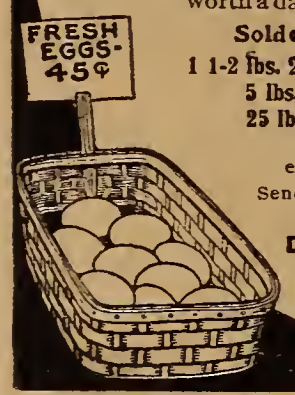

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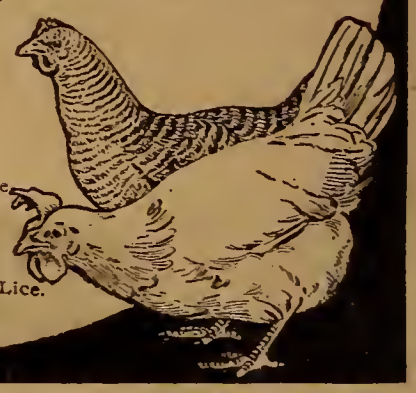

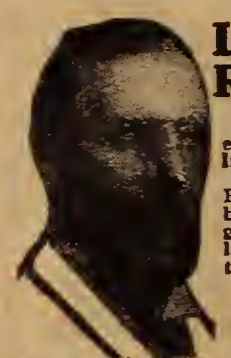

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and is guaranteed to produce 75% hatches or better. Takes less oil and gives less bother. Is simplest and surest. **Get Johnson's Big Free Book.** A poultry book by a man who knows 176 pages. Every page a poultry sermon. More than 300 pictures. Send your name to

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The Coiled Spring Steel Wire used in all Page Fences keep the top and bottom firm and rigid at all times. This does away with the need of top and bottom boards, and Page Fence requires fewer posts and staples. The whole fence is heavily galvanized—compact—strong—elastic and long lived. Send for catalog and folder.

Page Woven Wire Fence Co., Box 6514, Adrian, Mich.

The Best Book Ever Written on
Incubators

A man who has devoted 26 years to perfecting incubators has written a book. It tells all that he learned by hundreds of tests with different incubators in his hatchery. It tells in a fascinating way just the facts you should know before buying. We send the book free because the man who writes it is the man who has make the Racine Incubators and Brooders. He shows them as they are today, and tells why you should have one. No one can read this book without wanting this man's machine. Write for it today. **We Pay the Freight.**

Racine Hatcher Co., Box 42, Racine, Wis.
Warehouses at Buffalo, Detroit, Kansas City, St. Paul.

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Our new book telling Whys and Wherefores of Poultry Profits—Why Ertel machines make most for their owners; how hatches are uniformly over ninety per cent with our machines: how we pay freight and why our prices are lowest—will be sent yon free.

Yon owe it to yonrself to learn the vast difference in results between Ertel Incubators and others. Please say whether interested in large machines or a small outfit.
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Guaranteed best hatcher is Cyphers Incubator proved so by beginners, experts and Agricultural Experiment Stations. Write to prove it by our
FREE 212-page Book, illustrates what others are doing towards making Poultry Pay Big Profits. Money-Back Guarantee.
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Our new 128-page Poultry Book teaches the inexperienced and gives the expert many valuable hints. Tells why
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are best. Offers 14 varieties of fine birds and eggs at low prices. Catalogue free. Booklet on "Proper Care of Chicks, Ducks, Geese and Turkeys," 10 cents. Poultry paper 1 year 10 cents.

DES MOINES INCUBATOR CO., 67 Second St., Des Moines, Ia.

GET MY LOW PRICES

Before you buy an Incubator. I manufacture in large quantities and sell direct to you.

IDEAL Hot-Air and Hot-Water Incubators and Brooders
hatch more chicks and stronger chicks. Send for my big free handsomely illustrated book, "Poultry for Profit."
J. W. MILLER COMPANY, Box 31, FREEPORT, ILL.

125 Egg Incubator and Brooder Both For $10

If ordered together we send both for $10 and pay freight. Hot water, copper tanks, double walls, double glass doors. Our free catalog describes them.
Wisconsin Incubator Co., Box 10, Racine, Wis.

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and Almanac for 1908 contains 220 pages, with many fine colored plates of fowls true to life. It tells all about chickens, their care, diseases and remedies. All about Incubators and how to operate them. All about poultry houses and how to build them. It's really an encyclopædia of chickendom. You need it. Price only 15cts.
C. C. SHOEMAKER, Box 1246 FREEPORT, ILL.

Hatch Chickens by Steam with the EXCELSIOR INCUBATOR Or WOODEN HEN

Simple, perfect, self-regulating. Hatch every fertile egg. Lowest priced first-class hatchers made.
Send for free Catalogue.
GEO. H. STAHL, Quincy, Ill.

PROFIT and PLEASURE IN IT

No Toy. A Practical Self Regulating 50-Egg $5 BUCKEYE Guaranteed to hatch every hatchable egg. With a 50-chick Brooder, a Complete Outfit $9.00 Freight Paid East of the Rockies and 40 Days Free Trial.
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Box C 28 Springfield, Ohio

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Our big Poultry book tells how to make it. How to breed, feed and market for best results. 100 illustrations. Describes largest pure bred poultry farm in the world. Tells how to start small and grow big. All about our 30 leading varieties. Quotes lowest prices on fowls, eggs, incubators and brooders. Mailed for 4 cts.

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RELIABLE INCUBATORS

Made on the right principle. That's why they hatch the right kind of chicks, in the greatest numbers. Send for our new big Free Poultry Book—the result of over 26 years' rich experience in the poultry business. Intensely interesting—instructive—profit producing.

Reliable Incubator & Brooder Co., Box 41, Quincy, Ill

GET OUR PRICES

before buying birds, eggs or supplies. Choice selection, fair dealing. We can please you. Niesman's Poultry Guide for 4 cts.
F. W. NIESMAN CO., Box 98, Freeport, Ill.

Greider's Fine Poultry Catalogue.

Tells all about pure-bred poultry and illustrates 60 varieties. Contains 10 beautiful chromos. Gives reasonable prices of stock and eggs. Tells how to cure diseases, kill lice, make money. Only 10 cts. postpaid. B. H. GREIDER, RHEEMS, PA.

40 BREEDS Fine pure bred chickens, ducks, geese and turkeys. Northern raised, hardy and very beautiful. Largest poultry farm in the Northwest. Fowls, eggs and incubators at low prices. Send 4c for fine 76 page poultry book and catalog.
R. F. NEUBERT, Box 837, Mankato, Minn.

Poultry Raising

A USE FOR CEMENT

THIS is an age of cement, not only the old-fashioned kind improved upon, but for the use of cement blocks in building. It would be almost too expensive for the poultryman in moderate circumstances to build his poultry houses of cement blocks, but if he could afford it there would be no further need of repair every season. However, there is one use to which cement may be put, and that is in the floors.

Cement floors are not a new thing at all, but the time is coming when no other kind will be used in modern poultry houses. They have numerous advantages over other floors. In the first place, they are more easily cleaned than any other kind of floor. All the poultryman has to do is to scrape off the dirt and litter and give them a thorough drenching. Every particle of dust and filth can be removed in this manner. It is almost impossible to clean a board floor by scrubbing, for no matter how much of an effort is made, the cracks and crevices cannot possibly be thoroughly cleaned. Then, again, there is no harboring place for lice in the cement floors. There are no little holes, worn places, crevices or corners in which those pests may harbor. That is a great advantage in the favor of the cement floors.

No matter how thoroughly the wood floor may be constructed, there is sure to be some little crack through which the drafts will enter, and where drafts are will be found disease and all forms of colds. Fowls do not like cold drafts, no matter how small the drafts may be, and if the birds are not comfortable they will refuse to lay.

There is only one thing that may appear to be a drawback to concrete or cement floors, and that is that they are considered cold. That is easily obviated, for if the farmer rightly manages he will have a good substantial layer of fine dirt over his poultry-house floors, no matter whether they be board, dirt or cement. On top of this dirt should be kept clean litter, so that the fowls will have a good scratching place on stormy days, and so that it may be easily removed, carrying the dirt and filth with it, and new material substituted. In the summer the fact that cement remains cool is a great advantage, for the hens are always glad to find a cool spot in which to rest when the hot sun is shining in the yards.

During the warm weather the dirt may be removed from the floors, and straw or leaves added, thus enabling the floors to remain cool. The dirt will not be needed, for the hens will remain outside to scratch or forage.

Cement is as cheap as good boards, and cheaper in the end. Any farmer can make a cement floor, and a child can keep it clean. Cement-block foundations for the poultry houses will be found a great advantage and very economical in the long run. It is in the wood and dark corners of boards that lice and dirt accumulate, and this they cannot do when cement is used.

◈

GET A GOOD START

There is a class of people who wish to "invest" their money in the poultry business. It is a good investment if one goes into that occupation in the right manner. Let all beginners commence with a few hens and then gradually work up to a larger business. It is unwise to put a great deal of money into the poultry business without a larger amount of experience. Climb the ladder of success and do not expect to make a lot of money at once just because a lot is invested. "We reach the top of the ladder step by step, and not by a single bound;" so it is in the poultry business.

Get a few good hens, let them sit and care for their broods. Next year get a small incubator if you have had success in raising the chicks with the hens, and then if you are sure that you can manage a few more, get more hens or another incubator. It is not only the hatching of the chicks that means so much, but the caring for them from the time they are hatched until they reach the market. There are many stages through which the little fellows must pass, and the poultryman is responsible for the loss that occurs, either directly or indirectly.

It would be a good plan, if one has money to invest in poultry, to put it out at interest for a year or two and invest the interest, until he is sure that he can make a success of it. Add a little at a time to the buildings on the place, building them substantially and good in the first place. Add new blood to the stock—this is imperative—and then in a year or so put as much in the business as you wish.

◈

CORN AMONG THE CHAFF

If we do not get eggs in cold weather, the hens will eat the heart right out of the year's profit.

Early chickens, pushed along fast, so that they will lay by the time winter comes, are the ones that make poultry profitable.

The handsomest hens are not always the ones that are worth the most as egg producers. See to it that you breed from stock that has a record for laying eggs. Same way when you buy. Look into the egg account of the parent birds.

There is not much fun in poultry just for the looks of the hens and roosters. A man soon gets sick of that. What we want is eggs.

Hens do not know when it is feeding time? Just look into that and see for yourself. You will soon change your mind. And it pays to feed regularly. Hens will get uneasy if you do not; and uneasy hens are uncomfortable hens, and you must have them happy to do their best.

A splendid ration for hens is boiled potato, mashed and fed warm. My, how they like it! You must have some small potatoes, haven't you? Try feeding now and then a ration to your chicks; not every day, but now and then, as a change.

WHITE WYANDOTTE CHICKS IN THE POULTRY YARD OF A NEW JERSEY MEMBER OF THE FARM AND FIRESIDE FAMILY

Look out how you sell your eggs. Sometimes we lose a good share of the profit by letting them go under the market. Keep posted.

I don't blame hens for not laying sometimes. Just to look into some of the nest boxes given them is enough to make a hen turn away in disgust. Hens have feelings about this. Clean out the boxes, and do it often. E. L. V.

◈

PLEASURE AS AN ASSET

There are thousands of individuals who keep a few hens solely for the pleasure derived, no regard being paid to the profit that may be secured, although it is an additional pleasure if the hens afford a profit. In such cases there is a ready market at home for all the eggs that may be laid. The family that consumes strictly fresh eggs may perhaps pay more for the eggs in the form of labor and food than their actual value, yet one can secure better products at home with a few hens than can be procured on the market stalls.

There is pleasure in knowing that one has the best to be had, and that there has been no opportunity for adulterating the goods. The wealthiest individual on earth can do nothing more with his wealth than to purchase pleasure and happiness, and if a small flock of fowls adds to the enjoyment of him whose time is devoted to his business, except when given to the birds, that which cannot otherwise be procured belongs in the list of assets.

Free Poultry Book Certificate

Cut out, sign and send this Certificate and by return mail you will receive a copy of our Great Free Book Telling How 140,000 Men and Women are Making Money with the Famous

Sure Hatch Incubator

The book is full of valnable help to beginners and professional poultry raisers. Tells why the Sure Hatch excels all other incubators—why it hatches most chicks that live and grow into dollars quickly. The Sure Hatch is the Incubator that runs itself and pays for itself. Send no money—the book is free. Use coupon or ask for it on a postal.

SURE HATCH INCUBATOR CO.
Box 66, Fremont, Neb., or Dept. 66, Indianapolis, Ind.:
Send book to
Name _____
Address _____

Best Birds, Best Eggs, Lowest Prices

All leading varieties pure-bred Chickens, Ducks, Geese and Turkeys. Largest Poultry Farm in the world. Fowls Northern-raised, healthy and vigorous. Fowls, Eggs and Incubators at lowest prices. Send for our big 132-page book, "Poultry For Profit," full of pictures. It tells you how to raise poultry and run Incubators successfully. Send 4 cents for the book, to cover postage.
J. W. MILLER COMPANY, Box 203, FREEPORT, ILL.

240-EGG INCUBATOR $10.95

120 Egg Incnbator	$8.50
60 Egg Incubator	6.00
100 Chick Outdoor Brooder	5.00
100 Chick Indoor Brooder	4.00

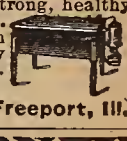
Why pay double these prices for machines that are no better? Reliance Incubators and Brooders sent complete with all attachments. Send for free book giving full particulars. We save you money and guarantee satisfaction. Reliance Incubator Co., Box 570, Freeport, Ill.

EARLY CHICKS PAY BIG

Hatched in January, February and March they make big profits. Our valuable, new Bulletin No. 10—
"Early Chicks"
tells how to do this successfully. Write for it today. Catalogue and Bulletin free. They'll help you make money.
Banta-Bender Mfg. Co., Dept. 78, Ligonier, Ind.

100% HATCHES 100% Every Fertile Egg

The Globe Incubator does this all the time—has done it for 16 years—and hatches strong, healthy chicks—chicks that live and grow. Our Globe Incubator Book with beautiful color plates tells you how to make more money ont of poultry. Sent for 4c in stamps. Write today.



C. C. SHOEMAKER, Box 399, Freeport, Ill.

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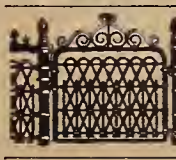
Chas. A. Cyphers, Pres.
341 Henry St., Buffalo, N Y.

Famous Invincible Hatchers From $4.00 Up

The safe way to buy an Incnbator is on a Real Free Trial. Invincible Hatchers are sold that way and results guaranteed. Brooders, Poultry Houses and supplies all at very low prices. 224-page book Free. Write to-day. The United Factories Co., Dept. 149 Cleveland, O.

Ornamental Fence

Cheaper than wood. Artistic. Strong. For lawns, churches, cemeteries. Send for free Catalog C. Address The Ward Fence Co., Box 625 Decatur, Ind., also manufacturers of Steel Picket Fence and Don't-Rust Farm and Poultry Fence.



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Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Churches and Cemeteries.
Coiled Spring Fence Co.
Box 403 Winchester Ind.

45 Varieties of practical and fancy pure bred poultry. Beautiful, hardy, vigorous. Largest, most successful poultry-farm. Thousands to choose from. Big Profitable Poultry book tells all about it. Quotes low prices on fowls, eggs, incubators, and supplies. Sent for 4 cents.
Berry's Poultry Farm, Box 140 Clarinda, Ia.

STANDARD BRED POULTRY

100 pens of the finest poultry in America, for sale. 14 different varieties. Write for FREE catalogue which also describes the best Incubators and Brooders. Booklet on Proper Care and Feeding of Chicks, Ducks and Turkeys, ten cents.
Royal Poultry Farm, Dept. 61, Des Moines, Ia

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Twice as many by feeding green cut bone.
MANN'S BONE CUTTER 10 Days Free Trial.
No money in advance. Cat'lg free.
F. W. Mann Co., Box 32, Milford, Mass

Make your own Fertilizer at small cost with
Wilson's Phosphate Mills
From 1 to 40 H. P. Send for catalogue.
WILSON BROS., Sole Mfrs., 653 Easton, Pa.

40 BREEDS PURE BRED POULTRY. Fowls, Eggs and Incubators at low prices. Largest plant in the Northwest. Send 4c. for fine 76-page catalog. R. F. NEUBERT, Box 837, Mankato, Minn.

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One Year (24 numbers) 25 cents

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Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, do not fail to say it is a **renewal.** If all our subscribers will do this a great deal of trouble will be avoided.

FARM AND FIRESIDE

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ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

SPECIAL NOTICE TO CANADIAN SUBSCRIBERS

To pay the excess postage charged by your government upon American periodicals, all Canadian subscribers to Farm and Fireside must remit 25 cents over and above the regular subscription price for each year their subscription is to run. This applies to both new and renewal subscriptions.

◈

As in everything else, the human factor in the farming problem is an important one.

◈

There are some men who will not take the time to plant fruit trees. Don't be in their class.

◈

When the price of grain goes up the farmer should seek more economic methods of feeding his stock rather than discontinue stock feeding.

◈

In feeding cattle alfalfa hay with corn alone gives large and profitable gains, but if supplemented with well-cured corn stover the gains will be less costly because of its low market value.

◈

When you go to your Grange meeting, or your farmers' club, or institute, always go prepared to impart some useful information. It will stimulate others and prevent conversation from seeking lower levels.

◈

Agricultural education has been developing rapidly in the past few years. Do not allow it to become a fad. Let the growth be perfectly natural, that a good foundation may be established on which to build up the most noble occupation of our land.

◈

Use every opportunity to make the farm home more beautiful. A few perennials planted in the early spring will not require a great deal of time, and will afford much pleasure by their flowers in the summer, as well as add to the attractiveness of the home.

◈

If you have difficulty in securing a stand of clover, another legume, such as cow peas or soy beans, should be tried, but this would necessarily be in the nature of a temporary relief measure. A top dressing of manure will often materially aid in securing a stand of clover.

◈

Are you wondering how you can make the yard about the farm home more attractive? Let Nature help you out. A green sward dotted here and there with trees and shrubs, just enough to relieve the monotony, will take little care and give much pleasure in return.

◈

Some varieties of fruit are less subject to attacks of parasitic enemies than others. A variety may be subject to one class of parasitic diseases and free from other classes. It is advisable to make a study of these points before planting your orchards and small-fruit gardens.

◈

It is well to have a definite rotation of crops planned out and to adhere to it rigidly; but have it arranged so that substitutes may be used in case any crop in the regular rotation should fail. The farmer who is able to meet the emergencies successfully is the fortunate one.

◈

If you have been selling your grain crops for a succession of years, no doubt you will see that your soil has been growing less and less productive. Where such is the case, try stock feeding in connection with your crop production and return a part of the fertility to your land rather than sell all of it.

Much will be gained if you are able to do the right thing at the right time. Try to have all those necessary odd jobs done before good weather comes, then you can have your entire time to devote to each operation connected with putting in the spring crop at the most favorable moment.

◈

When the warm days come and thaw out the soil in that field that was left bare all winter, just watch the rain washing away your land, and decide next year to have some crop as a winter cover to hold fast your soil. Such crops as crimson clover or rye will answer the purpose and will also furnish vegetable matter to turn under in the spring, which adds to the fibrous material in the soil and still further checks the tendency to wash.

◈

All who live on unimproved roads can appreciate the following pithy point from an address by Mr. E. B. Carter to an audience of Tennessee farmers:

"The farmer does not escape a heavy road tax even if not one dollar is spent on public highways. The 'mud tax' is heavier than that imposed by the authorities, for it is paid in wearing out his horses, his wagons and harness; in wallowing through the highway with half a load; in wasting his time waiting for the sun to make it passable in the spring; in driving to town with a double team when one of the horses might be left at home to do farm work if the road to town were smooth and hard as it should be."

GOLD-BRICK STOCKS

A Kentucky member of our FARM AND FIRESIDE family asks for information about gold mines in Mexico, and wants to know if it would be safe for him to buy stocks in any of them.

There are, of course, some rich gold mines in Mexico, and in the United States, too, that are operated by legitimate companies, but their stock does not go begging on the market. It is very doubtful if you have an opportunity to buy any of it. If you have, you will have to pay full value for it—that is, the price of the stock is so high that the dividends are not more than ordinary interest rates.

On the other hand, the great majority of flamboyantly advertised mine companies that are begging you to buy stock are fakes, pure and simple. The swindling promoters of these fake mine schemes are after your money. The man who is persuaded by their bold, clever, lying advertisements to give them any money in exchange for beautifully printed stock certificates should bid the money good-by, and carefully preserve the certificates, for they are all he will ever be likely to get for his money.

If you wish a safe investment for money, why not look around home. First, farm improvements, good farm machinery and conveniences for the home make good investments. Then there is the local savings bank, not giving high interest, but usually very safe. A loan secured by first mortgage on real estate you know to a man you also know is a safe place for your money.

RESPONSIBILITY FOR THE PANIC

Speaking of the investigation of the banks that required his official attention after the recent financial panic, Attorney-General Jackson of New York says:

"In my experience I have never met in a like period of time so many men who ought to be in jail. The lawless methods of these pirate bankers, the deliberate and flagrant violations of the trust reposed in them by the depositors, their reckless use of other men's money for the promotion of their own speculations, constitute a chapter in the history of high finance in this city which properly can be compared only to the operations of the Tweed ring or the traction gang, and which throws a great light upon the question as to who is responsible for the financial panic of 1907.

"With a little more simple, old-fashioned honesty and honor in the directors' room, and with public officials who will make and enforce laws honestly designed, there would be little danger of financial panics in the future."

* * *

As to the responsibility for the panic, Mr. Jackson says:

"And my observation has been that a large majority of those who charged it all to the President were more or less, directly or indirectly, connected with the interests who have tried to monopolize the prosperity of the country and who played their games of chance with other men's money, and who had been admonished against continuing their selfish and unlawful practises designed to crowd everybody else off the map."

◈

IN MEMORIAM

"There is no fireside, howso'er defended, But has one vacant chair."

There is sorrow in the home of one who has been a rare, good counselor to us all for many years. January 13, 1908, Mrs. Lora Ellen, wife of Fred Grundy, passed away in the forty-third year of her age.

To him the whole FARM AND FIRESIDE family can give heartfelt sympathy, for so

"The wide world is knit with ties
Of common brotherhood in pain."

In a letter to the editor Mr. Grundy says:

> "It does seem like the light of my life is gone out. She truly was the sweetest, most patient and cheerful woman I ever knew, even when I calmly compared her with any other. She dearly loved her pretty home and all its surroundings, and valued them at their full worth. She was a help and an inspiration to me, and I never went to her for counsel without receiving the best of all that came from a pure heart. She was so good-hearted and honest herself that she believed everybody else honest until she had indisputable proof that they were otherwise. She left me six noble children—three boys and three girls—the youngest only seven days old. Just before crossing the dark river she called the five older ones to her bedside, and after giving them motherly counsel that will live in their memories through life, she breathed the sweetest prayer for their welfare that ever came from human lips. She was a pure gem, and even though gone, the light of her pure example will not fade."

This tender tribute to the dear wife and loving mother gently draws aside the curtains and reveals the sanctity of a true home. Firesides like this make a nation strong and great. And after all, it is as Burns says:

"To make a happy fireside clime
To weans and wife,
That's the truest pathos and sublime
Of human life."

TO OUR READERS

Just a month ago, in the January 10th issue, we told you of the nut we had set ourselves to crack—the problem of adjusting FARM AND FIRESIDE'S subscription price to the increased cost of production.

Our keen desire, as well as our firm determination, to keep on giving you, of the FARM AND FIRESIDE family, the utmost for your money is what has made this a real problem. If we had been satisfied to give you a good average amount for your money—as much as you could expect to get elsewhere—it wouldn't have been a problem at all—it would have been as plain as the nose on your face.

In Cracking the Nut

We Give You an Opportunity.

We have now this announcement to make:

On March 31st our present subscription offers—one year for twenty-five cents, three years for fifty cents, seven years for one dollar—will be **permanently withdrawn.**

From now until the last of March we will accept subscriptions at the above prices, but under no circumstances can we accept any for more than seven years.

Do you realize what this means to you, who are on the inside?

It means simply this: that we are going to make—**we have got to make**—FARM AND FIRESIDE even better and stronger than it now is, in order to keep up our reputation for the biggest money's worth in the country. **But what is of vital interest to you is this: While we are making it the biggest money's worth to our new subscribers and they are paying the increased price, you will be getting the same value as they, but at the present lower price.** The longer the time you subscribe for now, the longer you will enjoy this advantage.

Never in its thirty years of life was the future so full of promise to the readers of FARM AND FIRESIDE. Never were the plans of its publishers so active, and never was the execution of these plans so certain to bring help and enjoyment to you and your family during the weeks and months to come.

See announcement on page 22.

The Secretary of Agriculture and His Work

By Major W. M. King

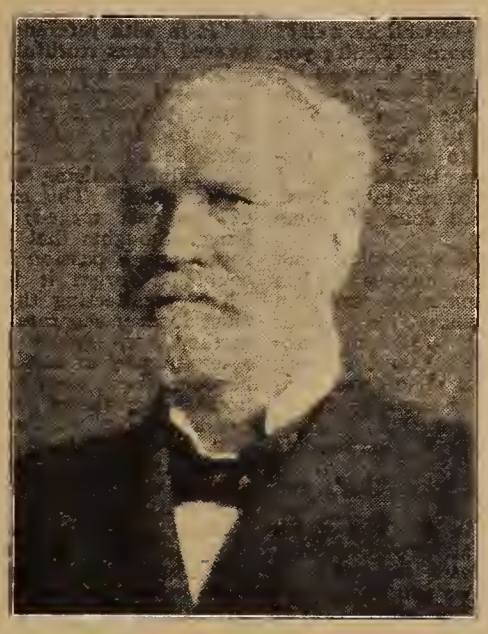
THE present Secretary of Agriculture, Hon. James Wilson, of Iowa, was born in 1835 in Ayrshire, Scotland, of sturdy Scotch parentage, thus inheriting those sterling qualities that have made his life work a success. In 1855 he located in Tama County, Iowa, and engaged in farming with successful results, becoming a veritable "son of the soil." He was elected a member of the state legislature for three successive terms, the last of which he served as Speaker. In 1872 he was elected to Congress and served in the forty-third, forty-fourth and forty-eighth sessions. Appreciating the need of scientific research along agricultural lines, he accepted the position of Director of the Experiment Station and Professor of Agriculture in the Iowa Agricultural College at Ames. Under the McKinley administration he was appointed Secretary of Agriculture, and entered upon his duties March 5, 1897. The Yearbook for that year was the first issued under his administration. In it he outlined plans for much useful and needed work, which has been largely accomplished, showing he is a man of performance.

The keynote of departmental work during the past decade has been to make agricultural methods as practical as possible. The American farmer has come to a realization of this fact, and the resultant demand for information from the Department of Agriculture has been unprecedented. Its publications cover a great variety of problems, and the demand for them and importance attached to them by practical farmers justify the opinion that the Department is serving a most useful purpose to agricultural and allied interests throughout the country.

Through the influence and rulings of the Bureau of Chemistry, importers and manufacturers of food and drug products are obeying the law with regard to adulterations and false labeling, with results of direct advantage to producer and consumer alike. The Bureau of Plant Industry has experts engaged in exploring foreign countries for new and useful agricultural productions, who have during the past year forwarded to the department for trial in this country over a thousand varieties of seeds and living plants. Among these are promising blackberries and currants from northern Korea; a collection of twenty-four named pears from north China; a north Manchurian apple; bush cherries, plums and peaches from Siberia; drought-resisting alfalfas; dry-land rices; a remarkable early ripening cherry, and a large assortment of hardy ornamental plants, also from northern China.

The dairy division is doing excellent work in the line of investigations relating to the conditions and demands of domestic and foreign markets, and the establishment of a high standard of purity and quality of milk products which will meet these demands.

The Bureau of Soils has done invaluable work in finding types of soil in various sections of the country that have proved to be specially adapted for the crops recommended by the bureau. In Texas and Florida, for instance, soils have been found especially adapted to the production of the highest-priced imported tobaccos, making their cultivation very profitable, as the product is a successful rival to the highly prized tobacco which has heretofore been grown exclusively in Cuba. Dry-land agriculture is being made a success by the planting of Kaffir corn, alfalfa, the drought-resisting wheats and other grains, grasses and forage plants.



THE HONORABLE JAMES WILSON

The soil survey work of the Department of Agriculture is assuming large proportions. Since 1895, when the work was inaugurated, one hundred and thirty-nine thousand square miles of six hundred and forty acres each have been surveyed, and expert, practical advice has been given with regard to the introduction of new crops especially adapted to particular soils. Advice is given as to soil management, drainage and the best methods of improving and maintaining the fertility of the soil.

As yet Secretary Wilson has seen no good reason to recede from the first position that he took with regard to the practical value of the durum wheat, especially for cultivation on the semi-arid lands of the Western plains. There is a growing demand for it for export to southern Europe for the making of macaroni and similar products.

Through the efforts of the Bureau of Forestry and the hearty co-operation of the public press there has come a sudden awakening of the people to the great and vital importance of staying the tide of forest destruction and promoting the systematic protection and preservation of the forests and woodlands that yet remain. The allied interests of forestry and irrigation have, through the excellent work of the Bureau of Forestry and the Division of Irrigation, accomplished much by awakening the public to the great and vital importance of this subject.

In compliance with repeated requests from grain dealers for the adoption of a better system of grading grain, Secretary Wilson has taken the first step by securing the services of an expert grain grader, and has established laboratories with the needed appliances for making effective a uniform system so much desired. Such a system will be of great advantage to dealers, handlers and grain growers.

Secretary Wilson has said: "Should ten million dollars or more be expended annually by the nation and states, and this be continued in the ratio of the increase in population, it may be confidently predicted that there will be agricultural schools for small children and secondary ones for those who are older, and that their education will be continued in the various agricultural colleges."

The Secretary early recognized the importance of beginning the education of farmers' sons and daughters in a way that would incline them to a course of Nature study which would result in their eventually becoming graduates of our agricultural colleges. He thought it advisable to provide a postgraduate course of instruction in agricultural science in the Department of Agriculture, to which such graduates as had taken the civil service examination might be admitted as assistants to the various laboratories. The practical knowledge there acquired renders them of valuable assistance in the department work and fits them for advanced positions in the various agricultural colleges and experiment stations.

The investigations which have already been made in the department have been of such practical value that their value in money can scarcely be estimated in the various lines of production. To illustrate: The introduction of Japan rice, together with modern and improved methods of cultivation, has in a few years created an enormous industry. "This year's rice crop is worth $19,500,000, or thirty-six per cent above the average for the last three years, and we are not only able to supply our own market, but are exporting rice to foreign countries."

The new building for the Department of Agriculture is rapidly approaching completion. The building is so constructed as to be fireproof, well lighted and well ventilated. The importance of having fire-proof space for the library has been taken into consideration, as it is the largest collection of agricultural literature in the world. The usefulness of this library not only to the department, but to agricultural scientists at the various colleges and experiment stations throughout the country, is best shown by the constant reference that is made to the one hundred and eighty-five thousand indexed cards, which form a valuable key to agricultural and scientific literature.

When Secretary Wilson first assumed charge of the Department of Agriculture he said: "The existence of this department is justified precisely so far as it aids the farmer to be a successful one." During his ten years of faithful and unusually efficient services, this has been his guiding principle. It is not too much to say that the Department of Agriculture under the direction of the present secretary has acquired a world-wide reputation of which American farmers are justly proud.

The work of the department is daily becoming of increased interest not only to farmers in general but to those engaged in other industrial occupations. Practical information along agricultural lines is having the desired effect of increasing production without impoverishing the soil. President Roosevelt says: "The Department of Agriculture has done a work of inestimable value, and stands in direct relation to our national prosperity to such an extent that its work must be enlarged and improved. Results are justifying expenditures, and the future will still further show the value of science applied to the farm."

A Plodding Plowman's Literary Success

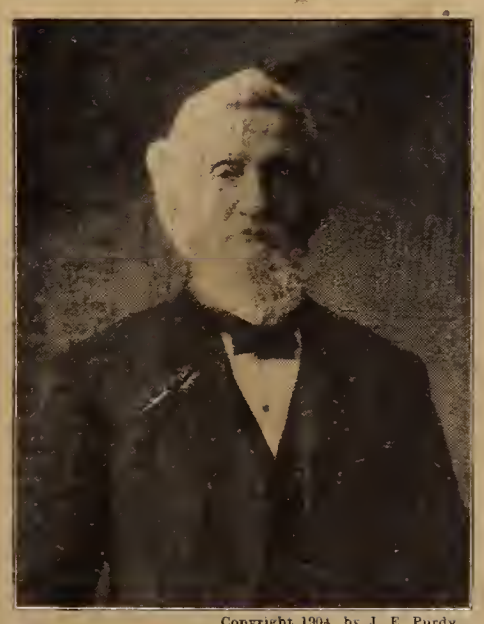
By J. L. Harbour

THE literary world is taking note of the fact that another one of its popular writers has recently passed the eightieth mile stone in his journey down the years. Few men attain this age so erect in figure, so alert in movement and so young in spirit as J. T. Trowbridge. No doubt it is his keen sympathy with all that is new and young in the world, as well as with all that is beautiful, that has kept Mr. Trowbridge so young in spirit and so vigorous in mind. More than half of the life of Mr. Trowbridge has been spent in the Arlington district of Boston, where he has a beautiful home the grounds of which slope down to a charming little body of water called Spy Pond.

Mr. Trowbridge has been a most prolific writer and he has about fifty volumes to his credit. Some of his earlier books like "Cudjo's Cave" and "Neighbor Jackwood" are read as eagerly by the youth of to-day as they were read long years ago by men who are now buying them for their own boys to read. And men along in what we call "middle life" will remember how they used to recite "The Vagabonds" when they were boys at school. While this is one of the most popular of Mr. Trowbridge's poems, it is not a favorite of his, and he feels that he has written many finer lines. It is a little difficult to tell what class of readers have found most pleasure in the work of Mr. Trowbridge. While he is usually regarded as a writer for boys, older readers have found a great deal of pleasure in his work, notably in his poems. There is always what one might well call the "human touch" in the work of Mr. Trowbridge, and much of his work has appealed to that great audience sometimes referred to as "the common people." Perhaps this is because Mr. Trowbridge knows what it is to be one of the "common people" himself. He was born in a log cabin which had been built by his father on a farm in New York State, and although he was the eighth child to arrive in the family, room was found for him in both the little home and the great hearts of his parents.

The part of New York in which Mr. Trowbridge lived was a good deal of a wilderness away back in the year 1827, when Mr. Trowbridge was born.

Mr. Trowbridge has ever been grateful for the fact that he was born on a farm and that he lived the free and healthy life of a farmer's boy. He knew what it was to walk between plow handles when he was a boy, and there was no part of the farm work that he did not do, but he had visions even in his early boyhood of a future for him somewhere in the great world of literature. He wrote such clever verses when he was but thirteen years of age that it was suspicioned that he copied them from some "poetry book." His first printed poem came out in a newspaper, the Rochester "Republican," when the aspiring young writer was sixteen. This poem found its way into other papers, and from that day to this Mr. Trowbridge has been a writer. He was seventeen when his father died and it became necessary for the fatherless lad to assume his own support. He decided to leave the farm and prepare himself for literary work. He lived for a time with a married sister in Lockport, New York, and went to school. He was in his twentieth year when he went to New York, that Mecca of such hundreds of aspirants for literary fame. He sent poems and stories to the papers and magazines over the nom de plume of "Paul Creyton," but the prices paid for literary work in those days was very wretchedly small. After a year in New York Mr. Trowbridge went to Boston, where he found a better demand for his wares, and in time he became editor of a periodical called the "American Sentinel." Later he became editor of a popular magazine of that day called "Our Young Folks." In May of the year 1858 was published Mr. Trowbridge's first book entitled "Father Brighthopes." The book was so successful that the publishers asked for another, and when "Neighbor Jackwood" came out just fifty years ago it made Mr. Trowbridge one of the most popular authors of the day. Then when such poems as "The Vagabonds" and "Darius Green and His Flying Machine" appeared, his popularity as a writer of poems also increased, and from that time he has never known anything but success in his life as a writer. Speaking of his sunset years a short time ago, Mr. Trowbridge said:



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J. T. TROWBRIDGE

"I am in the enjoyment of a tolerably green old age. I have known the sharpest afflictions, but though 'much is taken, how much more abides.' I still carry my five feet eight inches and my twelve-stone avoirdupois with easy uprightness, and am active on my feet, if no longer able to mount stairs two steps at a time or to cut threes and eights on the ice. That something of the freshness of dawn is preserved for me in the even of my days I believe I owe primarily to a sound constitution, an instinctive, never ascetic obedience to the laws of health, and, above all, to a mind open to the beauty and wonder of 'the existence in which we are embosomed.' Add to this a philosophy and renunciation which has enabled me to receive the rebuffs of fortune with 'a heart for any fate.'

Mr. Trowbridge not so very long ago wrote the following lines in an autograph owned by the writer of this sketch. In the lines there is a certain note of pathos, a recognition of the fact that there is not the "divine fire" to kindle his present and future enthusiasm up to the pitch he felt in his earlier days:

"Youth strikes a skilless blow,
But the metal is all aglow;
Age has the experienced hand,
But the fire in the forge is low."

The Imposter

By Frank E Channon

Synopsis of Previous Chapters

Amos Jackson, rich American, athlete, and his lawyer and fellow countryman, Donnaly, were returning from the Stanford Bridge Athletic Grounds, England, where the former had won great honors, when they stop a runaway tandem, make some new acquaintances, and receive an invitation to dinner. The hosts prove to he the Queen, and her uncle and aunt, of the island kingdom of Mirtheium. While on a tour of the Continent the royal party had met with a terrible loss in the sudden death of the King, since which time return to the island had heen repeatedly postponed, for it was feared that to return without a king meant the overthrow of the dynasty. Jackson in appearance proves to he a douhle of the late King, and the proposition is made that the American athlete return with the royal party as ruler of Mirtheium. During the interview a spy of the Cassell party of Mirtheium, is discovered hehind the draperies. He is captured, branded as a lunatic, and turned over to a private sanatorium for safekeeping. The royal party, augmented by the "Imposter" and his "new American secretary," return to the island and are welcomed with great pomp and ceremony. During the ridè to the palace an anarchist hurls a homb that drops in the royal carriage. The King, with great presence of mind, quickly throws it out of danger, saving his own life as well as that of his queen and many suhjects. The homh thrower is captured, and instead of his death sentence the King gives him "a licking within an inch of his life," and then puts him to work, hoping to reform him. Donnaly and the King decide to send to New York for the latter's pet experiment, his airship. During the review of troops, "Jessup," the dead King's faithful dog, harks viciously at the King's carriage, and hy its other strange antics causes many to wonder, and raises marked suspicion upon the part of Duke Rudolf. The King's love for the Queen hecomes apparent, hut his hopes are rudely shattered when in the evening he and Donnaly discover Rudolf and the Queen in the garden, see the Duke kiss the Queen, and hear perplexing conversation. That night the palace is fired. The King and Donnaly heroically rescue the Queen and Countess. Duke Rudolf is severely questioned by Donnaly. Evidence of incendiarism is discovered and confirmed hy the anarchist who had overheard the plot.

Chapter XI.—Continued

"Well, it was a plot, Your Honor, a downright plot, like we have in the 'Maffia.' Seemed like they had their knife into you and your mate here for something or other, and they was going to burn you out, but they didn't want to hurt the Queen; the one chap he was mighty particular over that, and kept saying again and again, 'Are you sure she's going?'"

"One moment, Davis," interrupted Donnaly. "Did you get to see either of them?"

"No, Your Honor, I didn't. They were standing right up against the outside wall, and much as I craned my neck, I couldn't get a flash at 'em, but I tell you one thing, I could swear to the one fellow's voice anywhere, that's what I could."

"That's an important point," noted Donnaly. "Go on."

"Well, they were there for another fifteen minutes a-talking to each other and arranging things, and when they quit I was in a blue funk, I can tell you, for how was I to get out. I hallooed to the guard, but not a soul was around, and I couldn't make any one hear, so there I sat and sat, and it's a wonder I ain't got gray hairs, for—"

"All right," interposed Donnaly, "that will do. You have done the King a great service, and he will reward you as he thinks fit. We shall require you to-morrow, and you will receive your instructions what you are to do between now and then. You will be placed in confinement again as before, but you may rely upon it that you have done yourself as well as us a good turn. Keep your mouth closed, and don't spoil all by gabbing to the guards. If they ask you what you said or did up here, keep mum, understand?"

"Yes, Your Honor. Do I have to wear them bracelets and ankle ornaments again?"

"No; that was against the King's orders in the first place, and we shall see to it that his decrees are not broken again. Now I shall call in the guard and send you back. Understand all I've said?"

"Yes, Your Honor."

"Very good."

Donnaly walked to the door again and brought in the jailers.

"Take the prisoner away," he said, "but see that he wears no fetters in the future; the King is well pleased with his conduct, and wishes to trust him. Go."

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Chapter XII.

Behind the Curtain

As the prisoner departed, the two Americans stood looking blankly at each other. Presently Donnaly broke the silence.

"We ought to have scored a point here," he said.

"I think we have," replied the King.

"We both have pretty strong suspicions, eh?"

"I think we have that, too."

"We must clinch then now. To-morrow you must invite a dozen people out to the château, among them, of course, the fellow we both have in our minds. You understand?"

The King nodded.

"Could you invite Count Cassell as well?"

"That would be rather more difficult; you know there is a strained feeling between us. The late King and the Count were not on good terms. But it might be done; kind of an olive-branch offering to him, eh? It would not be good form to have any festivities so soon after this tragedy, but I might invite him to the council table here, a thing which has not been done for some time, so I understand."

"Good! We can fix up that circular room on the ground floor for the purpose; it has lots of doors, and that's something my plan calls for. Now listen, Amos. This is what I propose to do: Summon a general council, which shall include this Count Cassell, and of course Duke Rudolf. If all are present there will be a muster of about fourteen, including the Queen and yourself. I shall not be there. I am sick, twig? Get another secretary, pro tem."

"Where will you be, then? What's the idea?"

"Hold on, I'm coming to it. The doors of that round room are all provided with heavy curtains. They lead to—goodness knows where, but I guess we can fix up one as a private apartment. This fellow, Davis, must be brought up secretly earlier in the day, and he and I will conceal ourselves behind one of these curtains, which must be made fast, so it cannot be pulled aside. We shall have the run of the room behind us, and the doors of that must be locked. Now, we will both stand close up behind the curtain, and every time he hears the same voice he listened to outside his cell he must grip my arm, but not utter a word. I shall know most of their tones; I certainly shall know Rudolf's voice—"

"By Jove! that's a good idea, Donnaly! What a great head you have. That's a simple arrangement, and it should work all right. Shall I consult Count Benidect?"

"Only in regard to summoning the council. Don't tell him our little scheme. The fewer are in a secret, the better chance it has of not being divulged. You remember how your orders regarding the finding of the coal oil were disregarded."

"All serene. I can fix it up O. K."

That same day, while Donnaly was busy arranging his room below, a general summons was issued for the Grand Council to meet at noon at the Royal Château on the morrow. Count Cassell received for the first time since the accession of Leopold X. an invitation to be present.

The Queen, pale and fragile looking, plainly showing the effects of her late ordeal, dined that evening with the King.

"What special subject is under consideration at the council to-morrow?" she inquired with a faint show of interest.

"It is with reference to the late fire," answered Amos truthfully.

There was a marked coolness now between the royal couple—an indefinable something, which prevented their speaking with freedom to each other. The King, knowing what he did, could not treat her as before, and Edna, noticing the coolness, was quick to resent it. The excitement and anxiety of the past tragedy had so occupied the King's thoughts that he had to some extent forgotten his passion for the Queen, but how could he forget it in her presence now? Then, recollecting the impassable gulf that must forever separate them, he drew himself farther and farther back into his natural reserve, until at last all conversation ceased between them, save that which ordinary politeness demanded. It had been thus with the late King, so that, had Amos tried his best, he could not have acted his part better.

At heart Amos despised himself for the part he was playing on this island life stage, and knowing, as he thought, the Queen's feelings, imagined that she, too, despised him, but with that dogged resolve which had brought him fame as an athlete, he determined that having ventured upon the adventure, he would stick to it until, at least, a convenient stopping place was visible, and meanwhile, Cupid, with a laugh and a chuckle, poured his fiery little arrows upon the American.

"Your Majesty will, of course, be in attendance to-morrow?" he inquired.

"Yes, sire, I shall be there. The hour is set for noon, I believe."

"At noon," he replied.

"Nothing has been discovered, I suppose, to throw any new light upon this affair?" she asked.

"Nothing has been discovered," he repeated absently.

The servants had withdrawn, and they were alone now. She flung herself back in her chair, and dropping her hands in her lap with a helpless gesture, said, speaking quickly and with little catches in her breath:

"I have never thanked you properly for your splendid bravery. I never can, but I wish you could understand how much I feel indebted to you. But few men would have dared that fearful fire for any one's sake, even one they cared for, let alone an almost total stranger. I wish there was something I could do that would convey to you my gratitude." She stopped and looked at him almost beseechingly.

All Amos' coolness, all the reserve which he had schooled himself in, was swept away in a second. She looked so pathetic, so beautiful, so sad, as she sat there nervously clasping and unclasping her hands, her matchless eyes fixed pleadingly upon him. He bent forward toward her.

"There is something," he whispered hoarsely.

"What?" she asked with a little gasp.

There was a moment's silence, then he said solemnly:

"Tell me why you met Duke Rudolf on the terrace the night of the fire?"

"Oh!" she cried, snatching herself back in alarm, "I cannot! I cannot! don't ask me!"

His madness vanished in a moment.

"I will not do so again," he said.

There was an embarrassing pause.

"Don't, don't think hard of me," she pleaded, "I did as I thought for the best."

"Your Majesty is the best judge of that," he said coolly. "You may be very sure that I shall not mention the incident again."

She arose and walked restlessly to a window, and stood gazing out, to hide her confusion and emotion.

When she turned around again she had recovered her composure.

"I shall meet Your Majesty at the council room to-morrow," she said, as she swept toward the door. Then, turning around with that same pleading look upon her face, "Perhaps some, some day I may be able to answer your question." The door closed softly behind her, leaving Amos grimly sitting chewing the cud of his bitter thoughts.

Long, long he sat in the waning light, thinking, thinking: then, with a muttered exclamation, he arose impatiently, and made his way toward his smoking room, there to drive vexation away with the charm of a cigar.

Donnaly found his chum singularly uncommunicative that evening, but well knowing the state of things, did not try to force his confidences.

There were many things to attend to the next morning. Amos and Count Benidect were busy arranging with the officials for the reception of the Grand Council, and Donnaly was "indisposed."

It required considerable ingenuity on the part of the secretary to successfully cover up his tracks and conceal the prisoner Davis and himself in the room he had selected for his purpose. At length all was ready, and the members commenced to arrive. All were seated when the King and Queen entered and took their places at the space reserved for them at the head of the massive table. The Queen Edna sat at the right hand of the King.

Arising from his seat at the further end of the table, the Count Benidect stated the object which had brought together the members, and the council proceeded.

Meanwhile Donnaly and the anarchist had successfully concealed themselves immediately behind a thick portière, which screened the eastern door of the apartment. The prisoner's hand rested lightly upon the secretary's shoulder. His face was alert with intelligent interest. Donnaly was cool and calm. They listened quietly as the voices in the next room rose and fell.

The Count Benidect finished speaking; the prisoner had given no sign. Then the Master of the King's Horse made a few observations. Still Davis remained passive. The King replied, and then the Queen said something in her soft voice. A deep bass voice broke the silence. Instantly Donnaly felt a vice-like grip upon his shoulder. Well he knew that voice; it was the Duke Rudolf's! A man with a high falsetto followed. The hand was still. Then the Duke's again, and once more that pressure upon his arm. There was not the slightest hesitation; always the grip followed the Duke's speeches. Then a new voice rose—a mellow, well-modulated voice—and Donnaly's shoulder felt that grip again. He looked up in surprise. Davis nodded reassuringly. Evidently he was positive. That mellow voice Donnaly had never heard before but the man at his side plainly had.

All through that two-hours' meeting, as the two tones of the two men rose, he made his sign—never failing, never hesitating; always certain, always positive—and the secretary became possessed with a great impatience to see the owner of that mellow tenor. Once he thought of making a small incision in the curtain to which he might apply his eye and identify its owner, but the risk was too great, and he abandoned the idea. He must trust to description and identification later.

Then came the final words and the conclusion of the deliberations. The council broke up, and the King and Queen retired, followed by the members.

The hand was removed from the secretary's shoulder, and the two men crept back to a seat at the further end of the room.

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Chapter XIII.

An Explosion

Secretary Donnaly recovered with surprising rapidity from his rather sudden indisposition. The next day he was about again as usual. He and his royal master were closeted all the morning together attending to the correspondence, for the King, since his return from his European trip, had developed an extraordinary amount of energy, something he had never before been noted for. With the aid of his new American secretary he now spent some hours daily in attention to state affairs. The ministers were frequently called in and asked for reports and accounts of their respective departments. The King showed a ready grasp of affairs, and his energy and enterprise were fast becoming proverbial. Evidently he had benefited by his short sojourn abroad. In fact, some of his advisers began to think too much so. His new secretary was a wonderfully alert man; nothing seemed to escape him. He had quickly caught up all the loose ends, and now seemed to have all the details of palace and state affairs at his finger tips. His memory was something phenomenal, and fairly astonished the officials with whom he was brought in contact. He could tell them, down to the lowest cook's helper, exactly how many servants were employed in the royal household, and their respective salaries; he seemed to know a great deal about their ability and character. He could inform them offhand just what was the orange and grape crop production on the island for the past decade, or the amount and details of that sum spent on the harbor improvements three years ago; while, to hear him rattle off the names and proficiency reports of the officers of

"Altogether, it was acknowledged that the American secretary was really a very talented man"

the army and navy, one would imagine he had a speaking acquaintance with them all. Altogether, it was acknowledged that the American secretary was really a very talented man. Evidently the King thought so, for he took his advice and sought his opinion on nearly every subject.

This morning, as they sat in the large, airy library over the piles of correspondence, their tones were low and confidential. The King, in a most unkingly attitude, his legs thrown carelessly on the baize table and his chair tilted back, emitted great clouds of blue smoke from his mouth and nostrils, a big black cigar protruding rakishly from his lips. The secretary smoked a French brier pipe, and studied some papers immediately before him.

Presently he pushed them away from him, and looking up at the King, said:

"I need that bill of lading to clinch this case; I think we nearly have these two fellows and their tools."

"Donnaly, what are we going to do even when we have it dead on them?"

"Do?" echoed the secretary with emphasis. "Why, pull 'em up with a jerk, of course."

"Expose the whole plot?"

"No, I didn't say that; I would simply use it as a screw to be applied when and how we think fit. I would break up forever this Cassell party and stop all this unrest in the island."

"Hold the threat of exposure over their head, eh?"

"That's the idea. Now I'll tell you what I've done, Amos. I have ordered the Count Cassell and Duke Rudolf shadowed. I have held up the sailing of that British tramp steamer which brought the consignment of oil from Odessa, and I've placed under surveillance the officers and crew. I've spirited away and placed in confinement the six men of the guard who were in charge of that basement, and whom we suspect of conniving with the conspirators, and I've given directions that not a soul shall be admitted to the ruins without a written order from the King. How does that strike you?"

"When did you do all this, Jake?"

"Between yesterday p. m. and this a. m."

"You've hustled."

"Best to move quick. No use loafing. The tracks are hot now. They'll cool soon."

There was a knock at the outer door, and as Donnaly cried "Enter," a page came in.

"Your Majesty," he said, standing at attention, "His Highness the Duke Rudolf of Roumania is in the waiting room and requests an audience with Your Majesty."

The King and his secretary eyed each other. Donnaly nodded.

"Show him up!" said the King.

"Leave him to me as much as possible," whispered Donnaly as the page left the room.

In a few moments heavy steps were heard approaching, and the Duke stepped briskly into the room. He bowed low to the King, then nodded to his secretary.

"Bon jour, mon cousine," greeted the King. "Pray be seated. Mr. Donnaly kindly close the door."

Rudolf cleared his throat, then, speaking in his deep, bass voice, said:

"Your Majesty, I have come to speak with you in regard to a matter of a rather private nature. May I request that your secretary withdraw?"

"There are no secrets, my dear cousin, between this gentleman and myself. He shares all my confidences."

"But this subject, Your Majesty, touches upon our family. It is of a strictly confidential character, and one which I think you would scarce wish other ears than our own to listen to."

"I must still take the same position, my dear Rudolf. What I know, my secretary knows; and what he is aware of, I am familiar with."

The Duke fidgeted in his chair. He was visibly annoyed.

"In that case, Your Majesty, I will proceed, but I respectfully protest against your ruling, and will warn Your Majesty that any consequences which follow must not be laid at my door."

"I will take full responsibility," said Amos.

Again the Duke coughed gruffly; he drummed with his fingers upon the table; he was plainly showing his annoyance; he hesitated to commence. Amos and Donnaly waited in silence. The secretary pushed the cigar box toward the nobleman.

"Thank you, no," he said shortly. "I never smoke before luncheon. Your Majesty, I have—er, I have, I, to put it bluntly, I have come to ask the reason why I am followed. Since yesterday evening I have been aware of it. Two men of Your Majesty's service shadow me constantly. I wish to know why?"

"Mr. Donnaly, can you satisfy the Duke's curiosity?"

"If Your Majesty so wishes," responded the secretary, "Your Highness," he continued, "you are being followed by the King's orders, for reasons of state, which it is not deemed advisable at present to divulge."

Rudolf sprang to his feet with an anger he could no longer control.

"It is an insult," he roared, "an insult which I will no longer brook! There is no reason, no sense in such a course! If His Majesty thinks—"

"The King is the best judge of these matters," said Donnaly quietly.

"I am speaking to His Majesty, not to you, sir!" snapped back the enraged noble.

"Then you are speaking also to Mr. Donnaly," remarked Amos in a determined tone.

"I ask Your Majesty a plain question. Once again, why am I followed by his orders? Answer me, sire!"

"You are forgetting yourself," said the King sternly. "Conduct yourself in a more seemly manner in the presence of your liege lord."

"Liege lord!" sneered back Rudolf. "Liege lord. A parvenu, that's what you are, sir! A cursed American pork monger, that's what you are, sir! An impostor, that's what you are, sir! Ah! ah, I have said it!"

The man was beside himself with rage and malevolence. He struck the table fiercely with his fist, and shouted his words at the top of his voice.

"I have you now, both of you. Curse you! Now what will you do? I can crush you like this!" and he smashed to atoms a delicately wrought inkstand before him, then hurled the wreck, with its inky fluid, full at the King's face.

The missile missed Amos' head by a hair breadth, thanks to a timely duck, and next moment the infuriated man was in the herculean grasp of the American.

The Duke was no baby. He was a foeman worthy of any man's steel. He was Amos' equal in weight and height, but not in skill or condition. The two men grappled savagely, swaying from side to side, then fell with a crash, and rolled over on the floor together; but the King was on top; the Duke was the under dog. In a second Rudolf was pinned where he fell, helpless, with a vise-like throttle on his throat.

"Fetch in the guard!" the King ordered quickly.

Donnaly ran to the door, but the hubbub had already attracted attention. Three or four soldiers burst into the room, and stood looking in amazement at the scene before them. Their King with his knee upon the prostrate Duke, who, almost black in the face, hissed and choked out threats, and strove impotently to regain his feet.

"Take him away!" ordered the King. "He is beside himself."

But before the men could execute the order, they were pushed aside, and fell back respectfully before the Queen, who stood gazing blankly at the two men on the floor.

"What—what is all this?" she screamed, clasping her hands together.

"I think it is a madman," said the King glumly, as he relinquished his hold upon the nearly unconscious Duke. "Take him away, men! Place him in safe keeping for the present!"

But the Duke had recovered his breath and voice by this time. As the soldiers attempted to obey their orders, he waived them back with an imperative gesture. His swarthy face was darker still with unbridled anger and mad resentment.

"He is an impostor!" he shouted. "An impostor, I tell you all! Dare to lay hands upon a Duke of the Royal House—" Then, as in spite of his utterances, the soldiers flung themselves upon him, "Wait! Wait! I will show you! He is an American! An American, I say! You hounds, unhand me! Your King is dead, you fools, dead six months ago, and this Yankee has been deceiving you all! He is no King!"

"Take him away!" ordered the King again. "He is raving mad. I ordered him here to arrest him on the charge of firing the royal palace. It was he who did it!"

The room was full of people by this time. Officials, servants, ladies in waiting, soldiers, ministers—all who could get there, had. Raising his hand impressively, the King spoke again.

"You may all know it now," he said. "There stands the man who fired the palace!"

"And, there," hurled back the Duke, "stands the man who has deceived this people—the impostor!"

They hustled Rudolf away, ranting, swearing and cursing. The room was cleared, and the King, his secretary and the Queen alone remained.

◈

CHAPTER XIV.

CUPID STRIKES HOME

THE King straightened his disordered dress.

"Well," he asked, looking around at the two with a half smile upon his face, "What now?"

"As before," replied the secretary. "Nothing is changed. Our plans are the same. He fired the palace, we can prove; he has simply hastened us a little."

"But what about his charge?"

"The ravings of a disordered mind, prompted by enmity, jealousy and revenge. The case is very plain."

"But what if he, too, can prove his charge?" asked the Queen very quietly.

"Madam, have you any information you can give us that will tend to show that he can?" The King, too, was speaking quietly now. He looked almost reproachfully at his consort.

"Yes," she replied, "I have."

"It would be well if you would place us in possession of it, then."

"I will do so, sire. Duke Rudolf has in his possession information which shows that the late King died in England."

"But has he proof of it?" inquired Donnaly pertinently.

"He will have when the next mail steamer arrives from the west."

"How do know this?"

"He told me so."

"When?"

"The night of the fire."

"Where?"

"On the terrace."

"When we saw you in his company, madam?"

"Yes, sire."

"Why did you not inform us before?"

"I was endeavoring to dissuade him from his purpose of exposing the —the—"

"The fraud," said the King brutally, supplying the missing word.

"Yes," acquiesced the Queen Edna meekly.

"'I did not know what to do, so I toyed, I played with him, hoping, hoping for I know not what'"

"Tell me, madam, does the Count Benidect know of this?"

"He does not, sire."

"You had hopes that you might dissuade him—the Duke, I mean—from his purpose?"

"Yes, I had hopes."

"On what did you base those hopes?"

"That I had rather not say."

"You held some threat over him, perhaps."

"Oh, no, no, I did not. Don't ask me."

"Madam, the Duke was enamored with you."

She covered her face with her hands. "Yes, yes," she confessed. "Don't, don't press me any further. I have told you all I know."

"But you, you," almost shouted the King, catching her by the arm as she drew back, "you! What of you?"

"I did not love him," she said in a frightened way. "I could not."

"Thank God!" cried Amos fervently.

She sank into a chair wearily, and let her head fall upon her arms.

"Go," whispered Amos to his chum. "Go, man, don't you see?"

Donnaly slipped away quietly from the room.

The next instant the King was at her side. He drew her gently toward him. She was sobbing like a child.

"Tell me, tell me," he pleaded, "Edna, you do care for me? It is not him you love; it is me, me, me!" He cried out the last word triumphantly, for her happy, tear-stained face told him all he cared to know. Now he railed at himself. "Oh, why was I so blind? Why did I not see? Idiot that I was. You could not tell me!"

"I am happy now," she whispered, as her little hand crept confidingly into his. "I knew you were misjudging me all the time, but now, now, you know. I did it all, as I thought, for the best. He threatened that he would expose all if I did not, if I did not—"

"Did not what?"

"Did not marry him."

"But how could you, dearest, when you were supposed to be my queen?"

"He said he would arrange all that later. That was what frightened me so, and oh, the look on his face as he said it! I did not know what to do, so I toyed, I played with him, hoping, hoping for I know not what."

"If you had only told me, I would have fixed the cad," muttered Amos savagely. "He's had a good whipping to-day, at any rate," he added with keen satisfaction.

"That made me shudder," whispered Edna. "It was awful to see you two fighting just like animals. And you, you were so fearfully strong. I thought you would kill him."

"I felt like it," admitted Amos. "He fired that inkstand at me, you know. It just missed me, but he intended it to strike—no thanks to him it didn't."

"What will become of him now? What will become of us all? He knows all, and he is going to make trouble."

"Let him do his worst, dearest. I have you, what do I care? Now that I understand all, I feel like Tennyson's 'Sir Galahad:'

"My good blade carves the casques of men,
My tough lance thrusteth sure,
My strength is as the strength of ten,
Because my heart is pure.
The shattering trumpet shrilleth high,
The hard brands shiver on the steel,
The splinter'd spear shafts crack and fly,
The horse and rider reel!
They reel, they roll in clanging lists,
And when the tide of combat stands,
Perfume and flowers fall in showers,
That lightly rain from ladies hands."

Amos recited those famous lines with much feeling and spirit; it was not often he allowed his emotions to gain the mastery of him and soar into the realms of romance, but he was in deadly earnest now.

"It is beautiful," she said. "It is ideal. Would that we could live up to it."

They came back to earth again, and faced the sordid, perplexing questions which fronted them.

"You said he would have proof of this fraud of ours when the next mail boat arrived from the west. What did you mean by that, Edna?"

"Oh, I must tell you. That man who shadowed uncle when he was in England, and whom you confined in that—what do you call it?"

"Sanatorium," suggested Amos.

"Yes, sanatorium, well he has been released. He is on his way over here. In some way the Duke's agents managed it. You know, Count Cassell has many powerful friends, and together it was arranged, and the man set free. He is coming to tell what he knows. He will be able to substantiate Rudolf's claims."

"Forewarned is forearmed," quoted Amos. "He will never land. Trust Donnaly for that."

"But, Amos," she spoke his name for the first time with a shy little glance at him, "what shall you do with Rudolf? Must he be kept in confinement? This affair is going to make such a fuss as soon as it becomes known abroad."

"He is too dangerous a man to be turned loose at present."

"I know it. But where—what will the end be?"

"Edna, dear," he whispered softly, as he drew her toward him, "you never really cared for the late King, did you?"

"No," she answered calmly; "we neither of us cared for each other. The marriage was solemnized for policy's sake. My uncle said it was imperative, and I sunk my feeling for the greater exigencies of state, but we never loved each other."

[TO BE CONTINUED NEXT ISSUE]

◈

Triumph of Devotion

A FAMOUS Prussian general was in his youth a page at the court of Frederick the Great. His father was dead, and his widowed mother was obliged to work to support herself. He was a good son, and wished to aid her, but from his small salary he could send her but little.

At last, however, he discovered a means of earning some money for her. Every night one of the pages was required to watch in the room next to the king's sleeping apartment, to wait upon him, should he want anything in the night.

To many of them this seemed too troublesome, and when their turn came they would gladly have turned their watch off onto another. So this poor boy offered, in addition to his own regular turn, to watch instead of some of the others if they would pay him for it, which they gladly did, being sons of wealthy parents, and this money he sent to his mother.

One night the king was wakeful and desired the page to read something aloud to him. He rang and called, but no one came. At last he rose and went into the anteroom to see if any page was there.

Here he found the poor boy, who had undertaken the watch for that night, sitting at a table. Before him was a letter which he had been writing to his mother; but he was fast asleep.

The king stepped softly up to the table and read the letter, which began:

"My best and dearest mother:—This is the third night that I have held watch for pay, and I fear I cannot hold out much longer without sleep, but I am very glad that I have again been able to earn ten dollars for you, which I gladly send to you with this."

Touched by the good heart of the youth, the king let him sleep, and going back into his own room, brought two rolls of money, put one in each of the lad's pockets, and then returned to bed.

When the page awoke, and found the money in his pockets, he well knew who must have put it there, and he was very thankful that now he could aid his mother still further. Still he was at the same time alarmed that the king had found him sleeping.

As soon as possible in the morning he went to the king and humbly begged forgiveness for his carelessness, and thanked him for his gracious present.

The good king praised his filial love, and at once made him an officer and presented him with a further sum of money, sufficient to provide everything needed in his new position.

This good son rose afterward still higher and served the Prussian king as a brave general until he was a very old man.—From the German by Elma Iona Locke.

◈

The Rule of the Game

BY ALONZO RICE

My mind goes back to my childhood days
And the red schoolhouse on the hill,
Recalling each of the fine old plays
We played with right good will!
There was Mumble Peg and Prison Base,
Leap Frog, but the best of all
(Black Man was far too rough a chase)
Was played with a bat and ball;
Tip Up 'twas called. One held the bat,
The rest of us gathered about;
Who struck the ball remembered that
"Over the fence is out!"

I have grown since then to man's estate,
I have met what all men meet;
Beginning early and toiling late,
With some success but more defeat.
On other men's games I have often bet,
I have bought a gold brick or two:
I have lifted the little shell and let
The other man have his due!
The philosophy of it now I can see,
It is serious beyond all doubt;
In the school-day rhyme it comes to me,
"Over the fence is out!"

Common Sense and Common Remedies

BY HILDA RICHMOND

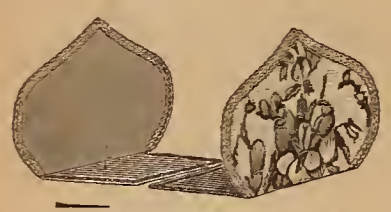
Rest

YEARS ago it was considered a great virtue to be never idle, but now we are getting sensible enough to know that the human body is too precious a machine to be worn out needlessly. To be sure, there are still wives and mothers, to say nothing of fathers, who hold to the old rule of working from before sunrise until long after dark, but even they are beginning to feel the effects of education along this line. It is just as much of a duty in life to rest as it is to work, whether every one thinks so or not.

In the same country neighborhood twenty years ago two ladies lived quite close together. Each had a family to care for, and each was in good health. One never allowed herself to be idle a minute, and her house attested to her industry. She was the one who was first through with housecleaning every spring and fall, her washing was always on the line an hour before any other in the neighborhood, her quilts were always more elaborate than any others—in short, she was the model housekeeper of the community.

Her neighbor was somewhat "slack" according to the standard of the thrifty woman, and had actually been known to put off the washing from Monday until Thursday if the weather was bad, a thing never heard of in the other home, and she took a nap every afternoon. The thrifty woman felt sure her neighbors would end their days in the poorhouse on account of such carelessness, but they are still on the farm. The thrifty woman is broken in health, and her limbs are twisted and racked with rheumatism, while her neighbor is still a young-looking woman. She still takes her daily nap and occasionally puts off the washing to go visiting or to town on Mondays, while her thrifty neighbor rests all the time now to make up for the days she lost years ago. Nature will not be cheated, and if ladies will not rest occasionally they may come to the time when work is impossible at any time.

There is nothing gained by getting up long before daylight in winter and then waiting for dawn. Many families pursue this course, but it is a foolish and unnecessary one. That is one of the things



HOME-MADE BOOK RACK

that drive young people from the farms. The morning is an ideal time to sleep when the mercury is hovering around zero, but the young people are routed out by the father, who thinks himself very thrifty because he gets up and has breakfast before five every morning, winter or summer. Young people need more sleep than their elders, and very soon they are casting longing eyes toward the town, where there are regular hours and not so much early rising. It is also foolishness to keep boys out feeding until late at night after a hard day's work. Many prematurely old men have been made so by never having time for rest and play in youth. Their narrow chests, stooped shoulders and lack of vitality all speak eloquently of boyhoods cheated out of proper rest and recreation. Their days have been shortened and their dispositions soured all to make a little more money.

Many times the doctor is called for serious cases of illness when a little rest in the beginning would have prevented all trouble. It is not a virtue, but a vice, that makes men and women drive frail bodies until they drop without a moment's rest. No one would think of using a valuable farm animal like that, but human bodies seem to be cheaper than animals. There are women all over the land who boast that they never sit down all day except to eat their meals, when a little rest would do them worlds of good. The sensible ladies sit down to peel potatoes and do everything they can do without standing, and every day, no matter how busy they are, they have some time to rest.

If any woman is thin and nervous and cross and worried, let her try getting twelve hours' sleep every night in a clean, well-aired room, and then take a nap every day. It is slow suicide to sit up late at night patching or sewing on new garments. It may save a few dollars at present, but the doctor will get them and a great many more in the end. Have your bedroom cold, but yourself very warm and comfortable. The angles will disappear, the bad temper will vanish, and rest will effect a cure. Put away the patent medicines that are warranted to cure all

aches and ails, and let Nature have half a chance. She will do the work well, and the cure will be permanent unless you begin too late in life.

["EXERCISE" WILL BE THE NEXT SUBJECT TREATED IN THIS INTERESTING SERIES]

◈

A Pretty Work Bag

THE materials required are one half yard of silk or sateen, of any preferred color—pink was used in the present instance—one spool of sewing silk, and one and three fourths yards of half-inch ribbon, of a shade to match the bag; one spool of white linen thread or a prettily contrasting color of silk-finished crochet cotton, as preferred. For the knitted panel, if of white thread, cast on 84 stitches, and knit across plain.

First row—Knit 14, narrow, over twice, narrow, knit 6 (narrow, over twice, narrow) twice, knit 6, narrow, over twice, narrow, knit 17, over three times, knit 4 together, knit 2, (narrow, over twice, narrow) twice, knit 6, over three times, knit 4 together, knit 1.

Second row—Knit 3, seam 1, knit 9, seam 1, knit 3, seam 1, knit 5, seam 1, knit 20, seam 1, knit 9, seam 1, knit 3, seam 1, knit 9, seam 1, knit 15.

Third row—Knit 12 (narrow, over twice, narrow) twice, knit 6, narrow, over twice, narrow, knit 6, (narrow, over twice, narrow) twice. knit 23, narrow, over twice, narrow, knit 13.

Fourth row—Knit 5, over three times, knit 4 together, knit 6, seam 1, knit 9, over three times, knit 4 together, knit 13, seam 1, knit 3, seam 1, knit 9, seam 1, knit 9, seam 1, knit 3, seam 1, knit 13.

Fifth row—Knit 10 (narrow, over twice, narrow) three times, knit 12, (narrow, over twice, narrow) three times, knit 11, seam 1, knit 19, seam 1, knit 6.

Sixth row—Knit 40, seam 1, knit 3, seam 1, knit 3, seam 1, knit 15, seam 1, knit 3, seam 1, knit 3, seam 1, knit 11.

Seventh row—Knit 8, (narrow, over twice, narrow) four times, knit 8, (narrow, over twice, narrow) four times, knit 11, over three times, knit 4 together, knit 4, narrow, over twice, narrow, knit 8, over three times, knit 4 together, knit 1.

Eighth row—Knit 3, seam 1, knit 11, seam 1, knit 7, seam 1, knit 14, seam 1, (knit 3, seam 1) three times, knit 11, seam 1, (knit 3, seam 1) three times, knit 9.

Ninth row—Knit 6 (narrow, over twice, narrow) five times, knit 4, (narrow, over twice, narrow) five times, knit 15, (narrow, over twice, narrow) twice, knit 11.

Tenth row—Knit 5, over three times, knit 4 together, knit 4, seam 1, knit 3, seam 1, knit 7, over three times, knit 4 together, knit 7, seam 1, (knit 3, seam 1) four times, knit 7, seam 1 (knit 3, seam 1) four times, knit 7.

Eleventh row—Knit 4, (narrow, over twice, narrow) twelve times, knit 5, seam 1, knit 9, narrow, over twice, narrow, knit 6, seam 1, knit 6.

Twelfth row—Knit 15, seam 1, knit 18, seam 1 (knit 3, seam 1) eleven times, knit 5.

Thirteenth row—Knit 6 (narrow, over twice, narrow) five times, knit 4, (narrow, over twice, narrow) five times, knit 9, over three times, knit 4 together, knit 2, (narrow, over twice, narrow) twiee, knit 6, over three times, knit 4 together, knit 1.

Fourteenth row—Knit 3, seam 1, knit 9, seam 1, knit 3, seam 1, knit 5, seam 1, knit 12, seam 1, (knit 3, seam 1) four times, knit 7, seam 1, (knit 3, seam 1) four times, knit 1.

Fifteenth row—Knit 8 (narrow, over twice, narrow) four times, knit 8, (narrow, over twiee, narrow) four times, knit 19, narrow, over twice, narrow, knit 13.

Sixteenth row—Knit 5, over three times, knit 4 together, knit 6, seam 1, knit 9, over three times, knit 4 together, knit 9, seam 1, (knit 3, seam 1) three times, knit 11, seam 1, (knit 3, seam 1) three times, knit 9.

Seventeenth row—Knit 10, (narrow, over twice, narrow) three times, knit 12, (narrow, over twiee, narrow) three times, knit 11, seam 1, knit 19, seam 1, knit 6.

Eighteenth row—Knit 40, seam 1, knit 3, seam 1, knit 3, seam 1, knit 15, seam 1, knit 3, seam 1, knit 3, seam 1, knit 11.

Nineteenth row—Knit 12, (narrow, over twice, narrow) twice, knit 6, narrow, over twice, narrow, knit 6, (narrow, over twiee, narrow) twice, knit 15, over three times, knit 4 together, knit 4, narrow, over twice, narrow, knit 8, over three times, knit 4 together, knit 1.

Twentieth row—Knit 3, seam 1, knit 11, seam 1, knit 7, seam 1, knit 18, seam 1, knit 3, seam 1, knit 9, seam 1, knit 9, seam 1, knit 3, seam 1, knit 13.

Twenty-first row—Knit 14, narrow, over twice, narrow, knit 6, (narrow, over twice, narrow) twiee, knit 6, narrow, over twice, narrow, knit 23, (narrow, over twice, narrow) twice, knit 11.

KNITTED ARM PROTECTOR

Twenty-second row—Knit 5, over three times, knit 4 together, knit 4, seam 1, knit 3, seam 1, knit 7, over three times, knit 4 together, knit 15, seam 1, knit 9, seam 1, knit 3, seam 1, knit 9, seam 1, knit 15.

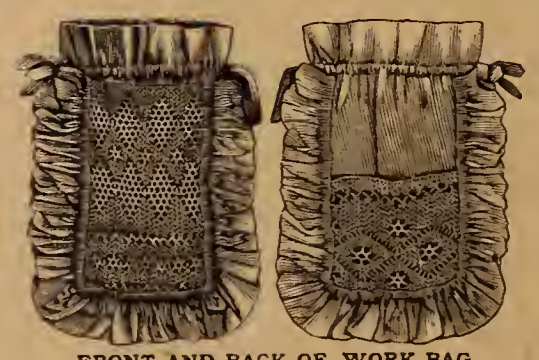
Twenty-third row—Knit 26, narrow, over twice, narrow, knit 27, seam 1, knit 9, narrow, over twice, narrow, knit 6, seam 1, knit 6.

Twenty-fourth row—Knit 15, seam 1, knit 40, seam 1, knit 27.

Repeat these twenty-four rows three times, then bind off.

Make a bag of the silk, one inch larger all around than the panel, except at the top, where allow about five inches for the frill, one half being turned in for the facing. Stitch around twice to make a casing in which to run the ribbon strings. Place the knitted panel on one side, and around the sides and bottom of bag, hiding the edges of the panel, put a puff made of a five-inch strip of the silk, the edges turned in and gathered.

ELMA IONA LOCKE.



FRONT AND BACK OF WORK BAG

◈

A Home-Made Book Rack

THE artistic as well as useful home-made book rack is not difficult to construct.

Have a tinner cut and bend into shape two pieces of galvanized tin similar to the design given. Select from your cretonne or art cloth a complete design for each section of the outside of the rack, and cut to fit even at the edges. For the inside or lining cover with dark green cotton moire material. Glue each of the materials and apply smoothly to the tin. Great eare should be taken that the edges adhere well to the tin. Use plenty of glue, in order that the binding will adhere the better, as it is of inch-wide gilt galloon. Previous to putting on the galloon, lather well with the glue, which makes it more pliable and easier to pull in shape around the curves and points. A good vegetable glue is best, and less likely to discolor the fabric.

This makes a very attractive receptacle for books. M. E. SMITH.

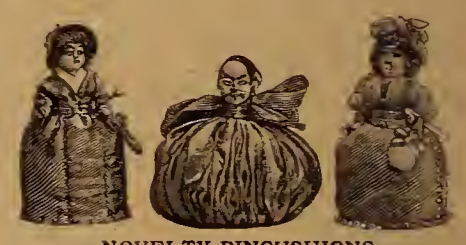
◈

Novelty Pincushions

THE little maid makes the prettiest kind of a pincushion for fancy pins, to stand on a toilet table or dresser. The quaint little figure with its full skirt and mob eap makes a very attractive ornament aside from its usefulness. A jointed bisque doll, with natural hair, measuring about five inehes in height, is used. A cirele of stiff cardboard about four inches in diameter is covered with silk or satin on one side. Stand the doll in the center of this cirele, and measure from the waist out to the cireumferenee, allowing one half inch extra for the swell of the skirt. This will be the width of the strip of silk for the skirt that you will need. For the length of the strip measure about the cardboard eircle, allowing just a little extra for ease. Use figured or plain satin lined with eheese cloth, to keep the cushion stuffing from working through. Join the strip at the narrow ends and turn up the lower edge, sewing it neatly with an over-and-over stitch around the circle of eardboard. Run a strong gathering thread in the upper edge. Make a squarc-neek waist of the silk for the doll, using white organdy for the full puff sleeve, which stands out in wide ruffles, and tie a dainty bow of ribbon the same color at the outside of the arm. Stand the doll in the eircle, pack sawdust about her until the skirt stands out in good shape and firm, then pull in the gathers and tie securely about the waist of the doll. Make the apron of white swiss, and tack the edges of the apron smoothly over the dress skirt with large-headed pins. Narrow white satin ribbon may be used for strings, but swiss is daintier. The mob cap is made of swiss, and has a band and bow of ribbon to match the skirt.

The demure little Quaker is constructed upon the same lines of proportion, but dressed in gray satin. For the body of the dress, eut sleeves and body in one. Fold a pieee of the silk five and one half inehes along the fold and four and one half inches long, shaping the sleeves slightly at the hand. Cut the silk open for the front, and a short distance along each shoulder, where the goods is double. Seam up the sleeves and turn in the silk on each side of the front. For surplus effect, lay a double fold of the organdy around the neck and shoulders of the doll before slipping the body on. Very tiny bands of white for cuffs finish the hands. The bonnet is on the order of a sunbonnet, made to fit the doll's head, and held in plaee with black-headed pins. A wide belt of the material secured in front with black pins eonceals the adjustment of the skirt. A swiss apron with a tiny pocket or none may be attached to the dress by means of black-headed pins of medium size, while all around the base pins with a larger head are arranged.

For the Jap cushion three fourths of a yard of four-inch yellow satin ribbon forms the dress, while one half yard of one-inch ribbon the same shade serves for the bow at the neck. The heads come secured to a pointed stick, which should be cut off until the stick and head stand about five inches high. Cover one side of the cardboard bottom, which is four inches in diameter, with ribbon, gathering along one edge very fine with silk thread to match. Overcast around the bottom, and join. With strong thread gather the upper edge. Place the head in a cheesecloth bag, and pack as for the others, draw over this the full satin bag, and tie tight around the neck. Adjust the narrow



NOVELTY PINCUSHIONS

ribbon to conceal the gathers, and end in a graceful bow at the back. These heads can be procured with a variety of faces and hair from dealers in novelties. They are used for favors, pen wipers and numerous trifles. HEISTER ELLIOTT.

◈

Pointers on Knitting

THE inability to follow the instructions given for knitting is often the result of a laek of perseverance on the part of the knitter. A knowledge of one set of abbreviations will materially overcome the main difficulty, the development of the design, whieh will then be comparatively easy if the instructions are correct.

In knitting the casting on of stitches is the foundation for all articles. The one best adapted to articles where an elastie edge is desired is developed with a single thread of yarn and two needles, as follows:

First make a loop in the yarn or thread, and slip it onto the needle; next slip the second needle into this loop or stitch, and throw the yarn around it, draw it through, and slip the loop thus formed onto the left-hand needle, thrusting the latter needle through it from front to the baek. Put the right-hand needle into the second loop, make another loop, and slip it onto the left-hand needle. Repeat in this manner until you have as many stitehes as are required.

Another method is as follows: Hold the end of the yarn under the third and fourth fingers of the left hand; with the right (which also holds a needle) bring the yarn from under the left thumb, up over it, and also over the first finger of the left hand, then downward under the fingers and up over the thumb; pass the point of the needle under the erossing, up back of that portion of the yarn that is brought down from the first finger, draw it forward toward the left, grasp the erossing with the thumb and finger, throw the yarn over the needle with the right hand (which holds the yarn as for regular knitting), draw a loop through, slip the yarn off the left first finger, and draw it down to knot the loop or stiteh on the needle. Arrange the yarn over the left

hand again, and make another loop or stitch in the same way. Repeat for the required number of stitches.

The stitch at the end of a row in knitting is called the edge stitch, but not spoken of thus in instructions. Always slip the first stitch on the needle and knit the last, unless otherwise instructed.

A chain stitch for the stripe of an Afghan is formed by slipping the first stitch and purling the last. To purl, which is the same as seaming, throw the yarn from its usual position back of the work in front of the right-hand needle, then insert the point of the needle under the next stitch, thrusting it through from the right toward the left; this will bring the right-hand needle in front of the left one instead of back of it, as in plain knitting. Now throw the thread around the right-hand needle by the same movement as the one used in plain knitting, and draw the loop backward instead of forward. Seam or purl as many stitches as is required, and throw the yarn back of the needle into its ordinary position. The front of the work is the side next to the knitter.

The abbreviations most commonly in use are as follows: K, knit plain; p, purl or seam; pl, plain knitting; n, narrow; k 2 tog, knit 2 together; th o, throw thread over the needle, sl, slip a stitch, or slide on other needle without knitting.

Repeat—This means to knit designated rows, rounds or portions of knitting as many times as designated by a star or from one star to another.

To bind off the needle, either slip or knit the first stitch, knit the second, pass the first or slip stitch over the second, and repeat as directed.

The above instructions are used in part, in making the "arm protector," so useful now that short sleeves are in vogue. It is knitted of blue Spanish floss and white wool. Using the floss, cast onto fine steel needles the number of stitches required for a wristlet. Rib for one inch (that is, knit one stitch and purl a stitch alternately), then using much coarser needles and the white yarn knit plain for ten rows (across and back composing a row), then rib one inch with the fine needles and the blue yarn. Then purl another section one inch deep with the coarse needles and white yarn. Knit plain ten rows. Repeat the sections until the desired length is attained. This form of knitting is more elastic and less tedious than the fine plain knitting

The edges may be finished with small eyelets, with narrow elastic inserted at the upper edge of the protector, or with small chain crocheted scallops.

Wristlets make a dainty gift and are but a trifle in expense.

M. E. SMITH.

How the Women of the Farm Can Make Money

For each plan or idea found suited for use in this department we shall be pleased to allow one year's subscription to Farm and Fireside. If you are already a subscriber, then you can have the paper sent to a friend. This, however, does not apply to extending your own subscription. If your idea is not printed within a reasonable time, it is very likely a similar idea has previously been accepted from some one else. Write plainly on only one side of paper, and enclose self-addressed and stamped envelope if you wish unavailable offerings returned. Address Editor Housewife, Farm and Fireside, Springfield, Ohio.

Asparagus

For the space occupied and time given there is nothing else pays as well on our farm as the asparagus bed. We have but a small bed, and sell most of it to butter customers, and could sell much more if we had it. So I am now enlarging the bed, both by setting out plants and by sowing seed. But whether any goes to market or not, a good asparagus bed always pays in health and pleasure for the farmer's family.

MRS. EDWARD TOWLER, Michigan.

Mother's Sage Bed

Many mothers nowadays raise this herb as did our grandmothers. It is recognized as a valuable plant both for its medicinal qualities and for its general use in the culinary department. Very many of the housemothers, though, depend on the druggist for their supply, and invariably receive an inferior quality.

There is no plant more easily grown in the garden. Select some mammoth, broad-leaved variety. Seeds should be planted early in spring in a hotbed, and transplanted, so as to form stalky plants before setting out. The garden bed should be rich, soft soil well enriched by the best fertilizer hen manure. Keep the soil well worked and free from weeds. A spadeful of fertilizer put on before a rain will produce good results. All flower buds should be plucked. Gather the sage on a bright day, clipping the large leaves carefully with sharp shears. Dry in a warm, dark room or in a high warming oven over the kitchen range.

An ounce of seed will grow enough plants to make nine or ten dollars' worth of dried leaves. The plant is a perennial, so if carefully handled, and covered with loose straw in winter, will give a good crop the second year. Quite a little sum can be earned each year by raising it to sell. The ladies will be glad to buy the fresh article of you at five cents a package. If you will do this once, the next year your orders will come very readily. The sage bed can occupy an out-of-the-way corner and be a source of income to the wife and children. Try it this year.

MRS. J. K. NEDRIDEK, Wisconsin.

Poultry

I keep all kinds of poultry. My chickens are Barred Plymouth Rocks. I sell eggs for hatching, as well as breeding stock. I have geese and ducks that yield a great many feathers which sell well. Geese and ducks will live on grass with but very little grain. Ducks sell at about fifty cents each, and geese at one dollar.

I raise guineas to eat. They live on weed seed and insects, and lay a great many eggs. They have the taste of wild fowl. I have been told they bring a good price in cities, but we eat ours, as well as what squabs I raise. These would bring one dollar and fifty cents a dozen if sold.

M. W., Iowa.

Stamping and Mending

If one is handy a pretty penny can be earned by stamping tub suits, hats, waist bags, jackets and dresser scarfs and doilies. If one has much time, one will find many glad to have hand work done ready for making. Waist bags and collar-and-cuff sets sell well.

Many mothers are very glad to get school dresses and aprons made at a reasonable price.

M. W., Iowa.

Caring for Sweet Potatoes

I put my sweet potatoes in dry sand in the fall when the first frost falls. I place a layer of dry sand in the barrels, then a layer of potatoes, alternating until the barrels are full. I never have one potato to rot.

MRS. J. W. SMITH, South Carolina.

Skill With a Needle

Any one of ordinary skill with a needle can clear a neat sum from the making of pincushion, sofa cushions and hat-pin holders.

The pincushions can be embroidered in the new Wallachain embroidery on lawn, and a lawn ruffle trimmed with lace stitched around, to add a finishing touch. A case for stuffing may be made from any colored material. A few bows of baby ribbon completes it. When shown to your neighbors or in a town they sell very readily for fifty cents.

Pretty covers for sofa cushions may be made out of lawn with a design of Valenciennes insertion sewed on them. With a ruffle of lawn hemstitched or feather stitched around them they are very neat and pretty. The design may be a block pattern or in the shape of an animal, bird or flower. I find these sell readily for seventy-five cents without back or inside filling. Huckaback cushion covers eighteen by eighteen inches or larger, according to price, may be darned with silk-finish cotton, and without ruffle or filling sell for fifty cents and more if the design is elaborate.

Hat-pin holders which are made from two clay pipes sell readily at from twenty-five to fifty cents. Each bowl is filled with a small bag made of silk, cotton or flannel and stuffed with bran. The pipes are crossed, the bowls upward, tied with a ribbon for a hanger, and hat pins stuck into the bowls. These may also be made and used for pincushions, and sell at the same price.

MISS HALLIE M. TEMPLE, California.

Caring for Children

A friend with three children, ranging in age from four to thirteen years, helps take care of the sick by the day, or at night staying only part of the time. When sitting up she does not care to read, so she makes children's hoods of silk or Angora yarn, bedroom slippers and shopping bags of shoe laces. She finds ready sale for all she makes. She also cares for people's children for so much an hour, afternoon or evening. Mothers are glad to find some one they can trust to care for the little ones. This same woman makes lace for so much a spool. Rooted plants are another source of income.

M. W., Iowa.

Raising Onions

Wishing to make a little pin money last spring, I bought twenty cents' worth of little onion seed. I raised thirty quarts. I expect to go into this work on a larger scale this coming spring.

MRS. SARAH SWARTZ, Pennsylvania.

Home Sewing

I sold nearly one hundred collars one year. They were made of white goods of different kinds, and bound with white or some pretty color material that would not fade.

I also made tatting for shirt waists, doilies, etc.

I have answered some good advertisements and have made some money canvassing with good articles.

An old lady here makes holders to use around stoves, and at last accounts had made upward of nine hundred.

MRS. IONE M. SKIFF, New York.

Runty Pigs

I buy runty pigs from the neighbors who have large herds. There are always some weak little fellows that would die if left to run with the herd, but if some careful woman takes them and gives them a fine warm pen, together with careful feeding, she can clear some money. One time I sold three hens for a dollar, and bought a pig and carried it home in my arms. In one year I sold it and its litter of seven pigs for thirty-five dollars. Again, I got two tiny pigs out of a fattening pen, and fed them hot milk with a spoon until they learned to eat, and six months later sold them for sixteen dollars.

BELLE MCINTIRE, Illinois.

Good Stock and Improved Machinery

I make money by keeping the best of Jersey cows and by feeding a balanced ration. In this way I get more milk, and by having a separator, I get all the cream, from which I make butter that brings a fancy price. With the separated milk I raise thoroughbred calves and pigs. I also keep pure-bred White Wyandottes, which I think are the best for laying and broilers.

MRS. M. R. ROCKWELL, Ohio.

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is never done—unless she uses GOLD DUST, and saves half the time and half the labor of other cleaning methods. GOLD DUST gets at the root of dirt in a twinkling, and leaves naught but cleanliness and brightness behind.

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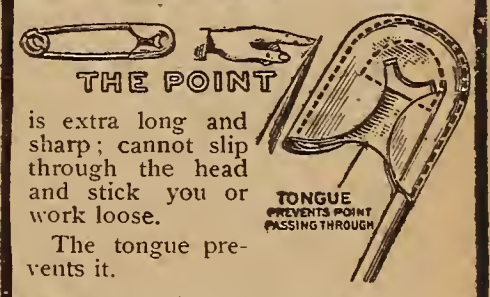

is extra long and sharp; cannot slip through the head and stick you or work loose.

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Miss Gould's Fashion Page

The Red-Rose Hat Pin

The French hat pin has a twofold mission. It serves not only to hold the hat on the chic little French woman's head, but it trims her hat as well. Here's economy for you in a really irresistible guise. Have you a dark hat—perhaps your every-day one—that needs just a little touch of color to brighten it up a bit? The new rose hat pins are just the very thing you need. To see them in a hat you would never think for a moment that they were hat pins. The prettiest are big red roses, and they certainly look most natural. They are made of a composition, and are warranted not to fade like the artificial flower. These new rose hat pins are really a most convenient little fad, for every time you put them in your hat differently you give a new trimming effect to it.

Big ball hat pins of clusters of pearls are also among the novelties, and they, too, add much to the charm of a hat. Hat pins of beads are also worn, shaped in either balls or made in the form of buckles.

The shirting fabrics show many novelties. The loveliest of all, perhaps, is the fancy madras here illustrated. The ground is white scattered with mercerized clover leaves, while here and there is a dainty, printed wreath design in color.

The satin striped dimity plaids also make up into attractive shirt waists and the mercerized cotton brocades are equally good looking, showing many new and novel designs and both having a silky look.

No. 1059—Waist With Buttoned-Down Plastron

Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, four yards of thirty-six-inch material, or three yards of forty-four-inch material, with one half yard of contrasting material for collar and cuffs

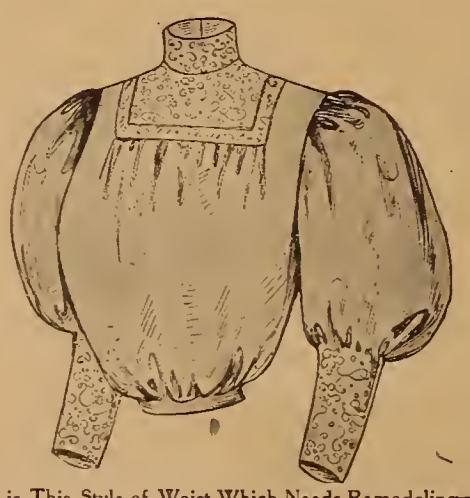
No. 1060—Modified Empire Skirt

(Belt and Front Gore in One)

Pattern cut for 24, 26 and 28 inch waist measures. Narrow front gore is extended around the waist to form Empire belt. Length of skirt in front 42 inches. Quantity of material required for medium size or 26 inch waist, seven yards of thirty-six-inch material, or five and three fourths yards of forty-four-inch materials

FASHIONS change so and clothes have a way of wearing out with such an unaccountable quickness that there is sure to be plenty of remodeling needed in one's wardrobe if last season's spring clothes are to be worn this spring. Sometimes one hesitates at the task, for there is not only the thought of the work, but the expense involved in buying additional material and trimmings. But the woman who owns a family scrap bag need not despair for it is sure to reveal much that is useful when it comes to making over clothes. Scrap bags always contain pieces of velvet that can be steamed, and in this way made to look as good as new. Then there are odd bits of silk, satin and broadcloth that can be made to serve as new trimming bands. There are also the scraps of lace and the odd pieces of embroideries which may be cut up to make medallions if they are not large enough for a yoke or a collar. Buttons are a help in renovating an old gown, and this spring they are to be one of the most fashionable trimmings. If you care to spend the time, a cloth-covered button showing a little hand-embroidered design makes an effective touch to a costume. Many of us have to study these little economies this year, and the month of February is a good time to add the needed freshening touches to last season's gowns.

THIS smart spring costume is made with one of the newest fashion ideas of the season. The novelty is in the skirt, which is not only continued above the normal waistline, but is cut in one with the belt, thus giving a modified Empire effect. The costume here illustrated would develop very attractively in a striped fabric, having the stripes run horizontally in both the front and the back gore, and up and down for the rest of the skirt.

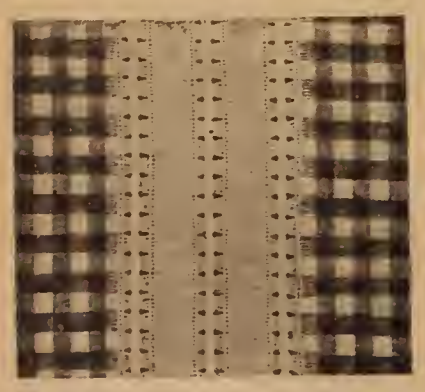


It is This Style of Waist Which Needs Remodeling—Short on the Shoulders, Sleeves Too Big, and Material Worn Under the Arms

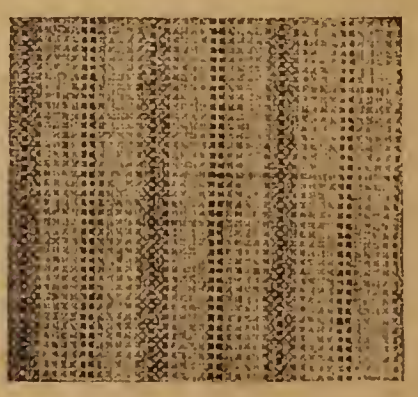
TAKE, for instance, the waist here illustrated. The shoulders are short, the sleeves simply huge and in an old-fashioned form, and no doubt the material is worn under the arms. Perhaps, too, the lace yoke and collar are torn as well as soiled, and yet the skirt of the costume may be perfectly good. Now the second waist illustration shows what a smart-looking jumper waist, with the new-style Japanese armhole, can be made from this decidedly old-fashioned one. Cut the neck out round instead of square. Remove the worn sleeves. Cut the armseyes out from two to four inches at the under-arm seams, and graduate up to nothing at the shoulders, which are already quite short. Be careful to cut deep enough under the arms to remove all the worn part of the waist. Now finish the neck edge with a fold of velvet or silk, sew a band of the same material into the large armhole, and make a new belt to match. If the old waist blouses too much at the belt, drop the material from one half to one and one half inches before arranging the new belt at the lower edge. This will give you a modern jumper waist that may be worn over lace, net or lingerie blouses. Inserted tucking makes a very attractive blouse to wear with a jumper waist, also any of the new lawns showing just a touch of color.

Here is the Waist Made from the Old One. It is a Jumper With Large Armholes in Japanese Effect

IF YOU are planning to have a new spring gown this year, there is no better material to select than serge, and no better color to choose than dark blue. Serge will be regarded as one of the very fashionable of the spring materials. Because of its wearing qualities it is safe to recommend it. All the shades of blue will be the vogue, not only navy blue, but such shades as Copenhagen blue, which suggests the coloring in a delft platter, and canard blue, which is duck blue.



Ginghams are to be in high style this summer, and the new samples easily explain the reason why, for never have ginghams been so effective as this year. This is one of the new checked ginghams in brown and white, showing a pretty cotton stripe in lace effect. The majority of the good quality ginghams have a lovely lustrous look. Many striped ginghams will be worn this summer, and almost all the new color tones which are reproduced in silks are to be found in the ginghams. Coin dots are also a fashionable design in self color and then again in a contrasting shade.



Another serviceable material for a lightweight skirt and coat suit is novelty suiting. It comes this year in greater variety of patterns than ever before, with stripes predominating. The sample here illustrated is gray with the stripes in dull shades of blue and red, with here and there a black line for emphasis. Tan colored suiting with stripes in brown and hair-lines in green is also good style, and also the suitings showing the stripe in self color. The new novelty serges also make up into stylish skirt and coat suits.

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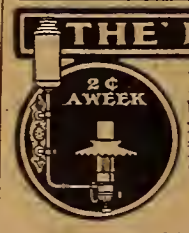

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Practical Fashions

No. 1076—School Apron
Pattern cut for 4, 6, 8 and 10 year sizes. Quantity of material required for medium size, or 8 years, four and one half yards of twenty-seven-inch material, or, three and three fourths yards of thirty-six-inch material

No. 1031—Tailored Bretelle Shirt Waist
Sizes 34, 36, 38 and 40 inch bust measures

No. 705—Dressing Sacque With Fitted Back
Sizes 34, 36, 38 and 40 inch bust measures

No. 1077—Princess Apron
Pattern cut for 6, 8 and 10 year sizes. Quantity of material required for medium size, or 8 years, two and three fourths yards of twenty-seven-inch material, or two and one fourth yards of thirty-six-inch material

No. 985—Reefer With Adjustable Shield
Sizes 4, 6 and 8 years

MANY tailored shirt waists will be worn this spring and summer. The broad-shouldered effect is good style and these waists all show long sleeves. Madras, linen, cotton cheviot and piqué are all good materials to use. The plainer the waists are, the more stylish. In making up shirt waists of sheer fabrics, such as lawn and dimity, the three-quarter-length sleeve is the most correct. These waists, as usual, are trimmed with lace and embroidery.

No. 627—Plain Princess Wrapper
Sizes 34, 36, 38, 40 and 42 inch bust measures

No. 1087—Work Apron With Sleeves
Pattern cut for 32, 36 and 40 inch bust measures (small, medium and large). Quantity of material required for medium size, or 36 inch bust, seven and one half yards of twenty-seven-inch material, or five and one half yards of thirty-six-inch material, with one and three fourths yards of embroidery for trimming

No. 443—Tight-Fitting Corset Cover
Sizes 34, 36, 38, 40 and 42 inch bust measures

No. 987—Single-Breasted Box Coat
Sizes 6, 8, 10 and 12 years

EACH season the elastic belt grows prettier. Once upon a time this elastic belting, which you can buy by the yard in different widths, came only in black. Then it was brought out in black and white, both plain and studded with steel nail heads. Now it can be found in the most attractive of delicate as well as dark colors. Flowered white elastic belts are among the newest of the French novelties. They are not so very expensive either, and they make such a pretty accessory to a summer costume.

No. 674—Empire House Gown
Sizes 32, 34, 36 and 38 inch bust measures

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Though the regular price of every Madison Square Pattern is ten cents, yet the woman who wants to can get one of these perfect patterns for just half the price—five cents. All she will have to do is to send in a new subscription or her own renewal or some one else's before March 1st. The woman who does this can have any one of the Madison Square Patterns that she wishes for five cents. Send orders for patterns in connection with a subscription, to Farm and Fireside, Springfield, Ohio.

Full descriptions and directions are sent with each pattern as to the number of yards of material required. The number and the names of the different pieces in the pattern are given, and how to cut and fit and put the garment together is all carefully explained. On each pattern envelope is a picture of the garment, which is also a help in putting it together.

When ordering patterns be sure to comply with the following directions: For ladies' waists give bust measure in inches; for skirt pattern give waist measure in inches; for misses and children give the age. To get the bust measure, put a tape measure all the way around the body, over the dress, close under the arms. Order patterns by their numbers. Satisfaction guaranteed or money refunded.

Write for Our Pattern Catalogue

Our pattern catalogue is a big, illustrated fashion magazine in itself. It contains designs for Miss Gould's latest Paris and London fashions, and page after page of simple practical designs. It tells how to dress the baby, what style of clothes to make for your young daughter, and gives you many helpful hints about your own wardrobe, too. We will send it to you for four cents in stamps. Address: Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

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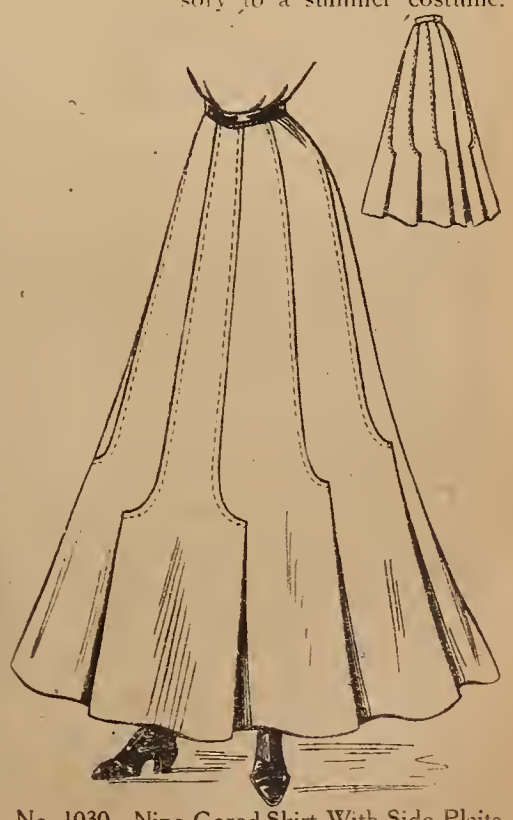
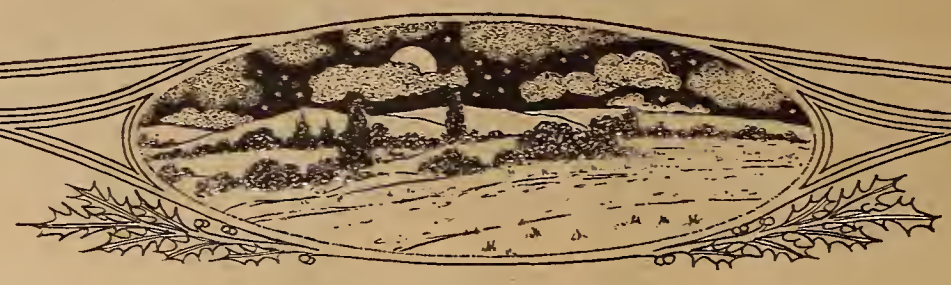


No. 1030—Nine-Gored Skirt With Side Plaits
Sizes 22, 24, 26, 28 and 30 inch waist measures

"Whar the Hand o' God is Seen"

An Appreciation of Captain Jack Crawford, the Poet Scout, and His Great Work for the Uplifting of Young America

By Eliza Shindel Marlin



Like it? No. I lave ta wander
'Mid the vales and mauntains green,
In the border land aut yander,
Whar the hand a' Gad is seen.

I would rather find a wayward stray
And help him ta atane,
Than entertain the angels
At a picnic 'raund the throne.

THERE is perhaps no more unique character before the American public today than Captain Jack Crawford, the Poet Scout, and as we review the grand work of this man we cannot help but rejoice in the fact that after years of the greatest kinds of hardships and discouragements the true manhood in him triumphs, and he is now, so to speak, coming to his own. His success is all the more remarkable when it is remembered that he came to us with no college credentials or school training. His knowledge has been acquired in the rough school of adversity. The inspiration of a loving Christian mother and untiring devotion to purpose on his part acquired for him a scholarship which institutions of learning fail to grant. His is that love of humanity not found in books, breadth of intellectual vision unusual, and wealth of poetic fancy that is genius born.

The first impression one gets of Captain Jack is that he is an honest man with a purpose in life truly worthy of any man. Captain Jack comes from fighting stock, and the battle he is waging for the uplifting of the young men of the world is certainly noble and inspiring. He always "fights fair, hits the line hard and never flinches."

The Captain's inimitable portrayal of early frontier life is quite in contrast with the bloody outlawry told in the cheap novels that have flooded the country for years, and indeed he never leaves a stone unturned to set the young and rising generation aright as to the true conditions of the West, both during the early days of Indian fighting and now. In his tale of "The Fireside and the Trail" he scores the fakers who travel about this and other countries boasting of the Indians they have killed, etc. "They are frauds," declares he, "and no man who has served his country in killing marauding Indians has ever written of it, nor do they go about boasting of it."

CAPTAIN JACK

Captain Jack's success cannot be measured in dollars and cents. Indeed, it is, perhaps, to his credit that he is a comparatively poor man. Hundreds of pioneers recall with great warmth and appreciation his helping hand, and we might add that not a few dishonest lyceum bureaus have grown rich by victimizing him. And with all his misfortunes the "Poet Scout" has gone along scattering his God-given sunshine, making hearts lighter, men and women better and telling of life on the Western frontier as only he can.

When a bit of sunshine hits ye,
After passin' of a cloud,
When a fit of laughter gits ye,
An' yer spine is feelin' proud,
Don't fergit to up an' fling it
At a soul that's feelin' blue,
For the minit that ye sling it,
It's a boomerang to yau.

There ain't no use o' kickin' an' swearin' at your luck,
Yer can't correct the trouble more'n you can drown a duck,
Remember, when beneath the load your sufferin' head is bowed,
That God'll sprinkle sunshine in the trail o' every cloud.

The beauty of the Captain's poems is that they all breathe of the character of Captain Jack. He never wrote a line of poetry in his life that was not inspired by a worthy purpose—chief of which, perhaps, was the scattering of sunshine.

Born of Scotch parents, John Wallace Crawford first saw the light of day in Canndonagh, County Donegal, in the north of Ireland, in 1857. That he is a fighter isn't strange, for his ancestors on both sides fought with Wallace and Bruce for the freedom of Scotland. Susie Wallace, his mother, was the daughter of William Wallace, the Scot refugee in Ireland, who was descended from Sir William Wallace, the famous chief.

Our subject landed in the United States three weeks after his father had enlisted in the War of the Rebellion in 1861. He picked slate for one dollar and seventy-five cents a week at the old Pott's colliery on Wolf's Creek, near Minersville, Schuylkill County, Pennsylvania. Later, as he puts it, he was "promoted" to mule driver. In 1863 he ran away when he was not quite sixteen years of age, and enlisted in the same regiment as his father, the 48th Pennsylvania, which dug the mine under Petersburg. He was wounded May 12, 1864, at Spottsylvania, near the Bloody Angle, and again on the second of April, 1865, in front of Petersburg. From one of these wounds Captain Jack limps, having been hit hy a piece of shell. His father was wounded twice, and as a result of the wounds died at the close of the war.

Captain Jack worked in the coal mines after his return from the war, and then went West, and was one of the pioneers that opened up the Black Hills country. He was Chief of Scouts of Black Hill Rangers, and Roger D. Williams, now General Williams, of Lexington, Kentucky, was his Lieutenant of Scouts. From there he went into the Sitting Bull campaign as Chief of Scouts, under General Wesley Merritt. He led the charge at Slim Buttes, or Owl Creek, Wyoming, with Lieutenant Swetka, and then commenced his daring ride of three hundred and fifty miles in three and one half days through a territory alive with hostiles, to give the first news of the battle to the New York "Herald." In this ride he heat five relays of couriers and made a scoop for the "Herald," for which he was paid five hundred dollars. Afterward Mr. Bennett allowed him, in addition, $225.25, which was the actual expense of the ride, two horses having dropped dead under him, for which he had to pay.

Later, in 1882-85, as Chief of Scouts with Generals Hatch and Buel, in the spirited campaigns against Victoria and Geronomo, he served with the Gallant Lawton, who said of the "Poet Scout:"

"Many a camp fire on the border has been enlivened by your inimitable powers of entertainment, with your own song and story, and many of my brother officers, with myself, have felt the hardships of an Indian campaign lessened by the enjoyment derived from that frisky tongue of yours when night had closed the weary march of the day."

After the last Apache campaign in New Mexico and Arizona he was appointed post trader by Robert Lincoln, then Secretary of War.

One of the chief objects of Captain Jack's continued appearance on the platform is to place the boys right with regard to the literature of the frontier, and to explain, so far as possible, the evil effects of the dime novel and the deadly cigarette, which, he says, has started more boys on the road to the Wild West and the penitentiary than any other evil.

"His temperance story," John D. Rockefeller says, "is the strongest that has ever been delivered from pulpit or platform."

Perhaps in no character of history is the influence of a mother so manifested as in the whole life of Captain Jack. His tribute to his mother is high and beautiful:

"I owe all that I am, all that I ever expect to be, to the influence of a Christian mother. Because of father's intemperance I was deprived of the first rudiments of an education, and knowing this, when on her death hed mother asked me to never touch intoxicants, and I never have. I owe much to one hundred noble women who have taken my hand and with tears in their eyes said, 'God bless you for the story you have given my hoy.'"

It was hecause of woman's influence and woman's encouragement that he was inspired to write "The Womanhood of Man," his latest long poem which has just been given to the public this month by the "Phillistine."

THE WOMANHOOD OF MAN

BY JOHN WALLACE CRAWFORD

There is gold in every fiber
Of the Womanhood of Man;
It has ebbed and flowed in bload and tears
Since this old world began,
From the veins and souls of heroes
And of heroines, since the day
When women wept and Jesus died
To wash our sins away.

I am just an optimistic,
Reckless, broncho sort of chap;
Though I stand for peace and justice
I am always in a scrap,
But my ancestars were fighters
Since red warfare first began,
And my only saving grace is
In the Womanhaod of Man.

I have prospected for treasure
In the gold lands of the West,
I have driven many a tunnel
In the mountain's rugged breast,
And I've found each little leader
Fram bedrock to surface pan
Was a mother-loaded magnet
From the Womanhood of Man.

I have sunk down to the bedrock
In a wayward brother's soul,
When the whispered name of "Mother"
Caused the God-sent tears to roll
From a seeming barren desert
Down the cheeks, all bronzed with tan;
It was God's assay far "colors"
In the Womanhood af Man.

I have testcd modest manhood
In the fiery front of war,
I have analyzed the metal
In the blood of many a scar,
And have found the lion-hearted,
Whole-souled hero of the clan
Was the optimistic product
Of the Womanhood of Man.

If you want to find the metal
That is twenty karats fine
You must prospect on the surface
Ere you sink to strike the mine,
But yau'll find it in the tailings
If you'll test them with the pan—
Find the gald of strenuous manhood
In the Womanhood of Man.

I would rather "face the music"
When the wild Apaches yell,
Rather face the hell of battle
Amid storms of shot and shell,
Than suppress the tears of gladness,
Or of sadness, while I can
Realize they are the essence
Of the Womanhood of Man.

'Tis the womanhood of manhood
That is always reaching out;
It has been my lone companion
While on many a dangerous scout,
And wherever fate may place me
I shall do the best I can,
To be worthy of the manhood
Of the Womanhood of Man.

Copyright, 1907, by John Wallace Crawford.

"To the man and the poem ex-Governor Adams, of Colorado, pays this compliment:

"I thank you for the advance copy of 'The Womanhood of Man.' It is a fine piece of sentiment. You have never done better. It is a portrait—you have thought to idealize; instead, you have painted the heart picture of Captain Jack. Unconsciously it is yourself that has been caught in your poetical kodak. In your kindness, affection and gentleness you are as true as the woman who nursed you, but in an emergency there would flash the spirit of 'Ancestors who were fighters, ever since the world began.'

"Like President Roosevelt, you could, without flinching, strike the center hard for right, for country or for friends.

"For your material gain you have too much of the fine fiber of the poet and the woman. A little more selfishness might multiply your dollars and broaden your acres; but then, if you were more selfish and calculating, you would not be the Prince of Good Cheer, preaching the gospel of sunshine. You will never have as fat a hank account as a steel or oil magnate, but there will he more who love you, and in the coinage of heaven that is worth more than all the golden mintage of man—a good heart is legal tender in two worlds, gold is current coin only in one. There are too many dollar chasers in this world—it is indeed refreshing to find a man who aims at higher game. Just as you are you suit those who know you, so here's our hand in good will and good luck."

THE POET SCOUT ENJOYS THE SUNSHINE REFLECTED IN THE LINES OF OTHERS

Young People

"The Jam Dragon"

BY MAYME GRIFFITH, AGE TWELVE

"NOW, Willie," said Mrs. Claton, "I am going over to see Mrs. Burton. Be sure to not go into the pantry and get into the jam."

After she closed the door Willie said to himself, "What will happen if I go in there!" So he opened the door to go in.

Just as he opened the door a dragon all made out of jam jars walked out. Willie started back. The dragon smacked his lips.

"My mother told me never to eat or even touch little boys," he said. "But then I get tired of eating nothing but jam."

The dragon started toward Willie. His very eyes were sparkling jars of crystal jam.

There is no telling what would have happened had not Mrs. Claton entered the room. The dragon vanished. Willie ran and told his mother all about it.

Mrs. Claton knew it was a dream, but she said nothing to Willie about it. Let us hope that Willie was cured of eating the jam without his mother's leave.

The Dog House

BOYS with their carpenter tools can make good use of their time by building an attractive house for the dog. The illustration shown on this page gives an idea of what can be done along this line. First build the house so that it will be sufficiently roomy and comfortable for Mr. Doggy, and then introduce any ideas of your own, or those of others, that will make the dog house an ornament to the yard. Periodically it should be given a thorough cleaning, just like any other home. "Get busy," boys.

The Puzzler

HIDDEN WORDS

When Softy takes the schoolmarm out
In carriage, buggy, sleigh,
He does his best to fool his friends
By acting in this way—

While driving through the village streets
He sits up straight indeed,
And clucks, and whips, and shakes the lines
To show his horse has speed.

But once they strike the forest lanes,
With no one near to see,
Ah! then the horse may choose his gait,
As slow as slow can be.

For Softy lets the lines hang loose,
And hugs with his left arm;
And then he puckers up his lips
And kisses that schoolmarm.

No one is fooled! On their return
Her hat is all awry;
Poor Softy's moustache has no shape,
Nor yet has his necktie.

Thirty-six hidden words, with meanings as follows, appear in regular order in the foregoing lines: Fowls—a limb—a vehicle—a century—an insect—a deer—a metal—a trap—not smooth—evil—generations—a small draught—chance—fine stony matter—a thigh joint—a fish——in what way—an animal—a weight—quiet—sense—mid-day—an organ—a game—a resinous substance—a human being—a twig—a head covering—one who inherits—a vase—statute—an animal—a grain—minced meat—a part of the body—a bond.

Riddles old
Riddles new
Some perhaps
Will puzzle you.

You see it and I see it, your friend sees it and my friend sees it, kings seldom see it and God never sees it.

What is it takes off its clothes in the fall and puts them on in the spring?

Which side of the horse has the most hair?

If a peck of peaches come to fifty cents what will a car of hickory wood come to?

If a rat goes into a corn crib and carries out three ears a day, how many ears of corn will he carry out in ten days?

When will the alphabet become shorter?

Why is a pretty girl and a soldier alike?

Why is a baby and a field of wheat so much alike?

What is it that can go up the chimney down, but can't come down the chimney up?

Which is the strongest day of the week?

If a mother had (4) four children and (3) three apples how would she divide them so each would have an equal amount?

Round the house and round the house but leaves one track?

Answers to Riddles in the January 25th issue:

Newspaper. Because she carries her train behind her. When is a-shaving. They work under ground. When dull. Andrew. The wish bone of a chicken, for it is a bone-a-part.

A Brave Young Woman

BY BERTHA ALDRICH, AGE ELEVEN

DURING the settlement of northern New Hampshire a mother and child were staying alone, while her husband went to mill, to be gone over night.

She was doing the chores, when her little girl said she saw a man. The mother was afraid it was an Indian, but she hoped it was a hunter.

That night she put her little girl to bed, but she sat up. After midnight she saw six Indians step out of the forest and come to the door.

The chief rapped, and said, "Squaw, open, squaw, open," but the woman didn't open, but reached for the ax and gun.

The chief then said, "We cut in," but she stood still by the door.

Then the Indians began to cut a hole in the heavy door until they had an opening large enough to get in. The chief stuck his head in, and the woman cut it off, and drew him in. Then, as the others came in,

AN ATTRACTIVE DOG HOUSE

she did the same by them, until there was only one left, who began to mistrust something, and ran away.

Her husband arrived two hours later, and said the Indians had done much damage.

Reward of Obedience

BY LESLIE R. MARSTON, AGE THIRTEEN

IT WAS New Year's Day, and Otto's father and mother had gone to his Uncle Jim's to make him a visit.

Just before leaving, his mother said, "Now, Otto, I don't want you to go on the ice to-day if it is not safe."

After a while some boys came along and wanted him to go skating. Otto took his skates and started to the lake with his playmates.

After a few minutes' walk the boys reached the lake. It was very beautiful in the morning sun.

The boys were in high spirits. Otto had his skates on and was starting off, when he saw a sign with the words "Danger! The Lake is Not Safe!"

Otto said, "Boys, I can't skate on this lake, for I promised mother I wouldn't if it wasn't safe."

The boys laughed at him, but he was determined. He started home with a heavy heart.

Just as he reached home he saw a thread of smoke ascending from a large cement factory. He immediately telephoned to central, and they did the rest.

The factory was saved, and Mr. Smith, the owner, made Otto a present of a beautiful Shetland pony and a buggy.

A Box Supper

BY V. IDEMA GLOER, AGE ELEVEN

GIRLS, just listen! Did you ever go to an entertainment and a box supper combined? Now listen, and I will tell you what a fine time I had just the week before Christmas. It was a beautiful moonlight night, and we had three miles to go, and such a jolly crowd were we.

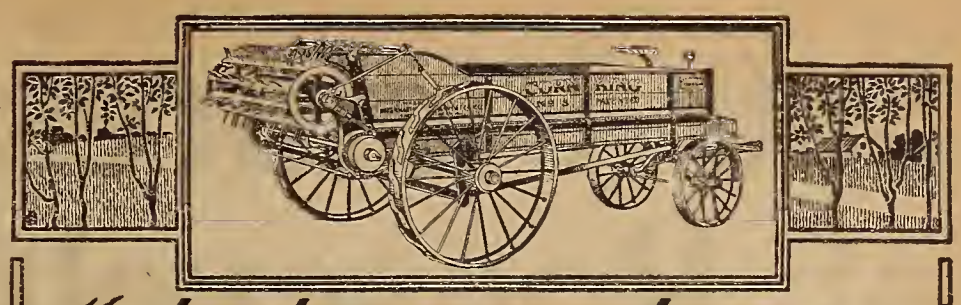
Our school is located in one of the rural districts, and we had free access to the beautiful vines and the holly with their bright red berries of the forest.

The stage was beautifully decorated, and the audience gazed with admiration on the scene. Just before we went through with our songs and dialogues, we had some excellent music, which was played by the string band.

Just after the entertainment was over came the box supper. Boxes of all kinds, shapes and sizes differently decorated—some lovely pink boxes, red and all kinds of colors.

The box that won the prize was cut of glass in the shape of a diamond and put together with blue ribbon.

This was our way of raising funds for a library for the school, and it proved to be a very successful way.



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There is no charm or secret about it. You simply spread it with a machine, and thus make it go twice as far, get twice as much good from it on the first crop, do your land more permanent good, and save half the time and labor of handling.

Manure is generally estimated to be worth $2.00 a ton handled the old way. There is no doubt that it is worth twice as much to the farmer who spreads with a machine.

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These machines differ somewhat in construction and operation, but all three are right working and of great durability.

They are proven machines. They embody the best mechanical ideas, the materials used in construction are the best for the purpose, they are made as simple as possible, and they handle manure in all conditions to the perfect satisfaction of users. Proof of all this is to be found in the record each machine has made in the field.

Is it not to your interest to own and use one of these spreaders on your farm?

Figure out for yourself and you must agree that it will be a paying investment, even if you do not have over twenty-five loads of manure to spread in a year.

You can't help but be pleased with the work, the easy handling, the light draft and the substantial making which saves you the annoyance of breakage and repairs.

Call and see these spreaders with the local International agent. He will gladly point out to you the superior features of these machines, as well as supply you with catalogue, colored hanger or other information.

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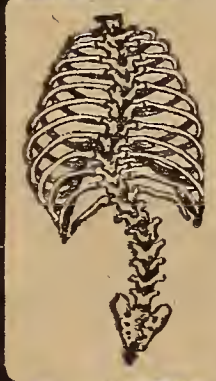

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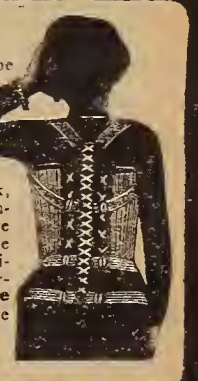

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The Procession in the Street of Jerusalem

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One of the Five Hundred

On March 31st the subscription price of FARM AND FIRESIDE will be increased. This is not a decision desired by us, but something that has been forced upon us by the greatly increased cost of labor, paper and everything that goes into a good farm paper like FARM AND FIRESIDE.

For over two years, while other farm papers have been increasing their prices, we have been putting this off for the benefit of our readers, but now, in justice to ourselves, we are at last compelled to raise the price.

We will let you renew or subscribe right away—not for one year, but for three or seven years—before the prices go up. If you do this, you will get FARM AND FIRESIDE at the present low prices for several years to come, while others are paying the increased prices. $1.00 now will save 50 cents after March 31st, and 50 cents now will save 25 cents then. Don't delay! Even if you have renewed lately, renew again for more years still, and be sure of the low price.

To relieve the rush that would naturally come in March and to show you our appreciation for sending us your subscription promptly, we will send you a great ensemble picture containing 500 different photographs of President Roosevelt, if you will accept one of the offers at the bottom of this page **before March 1st.**

This is the greatest and most wonderful picture ever made. It is really 500 different pictures and shows the President in 500 different and characteristic attitudes. It cost us nearly $1,000. There is no other picture like it anywhere on earth. No other like it can ever be made of President Roosevelt. It is the most wonderful picture in America of the greatest living American. The size is 14x22 inches, printed on heavy coated stock, all ready to put up in your parlor or sitting-room.

Remember, this great picture is really 500 different photographs. It can be obtained nowhere else on earth because FARM AND FIRESIDE has the exclusive right to reproduce it. This great picture is so wonderful that five years from now it will be worth many dollars, and after President Roosevelt is out of public office, this picture will be almost priceless to your sons and grandsons; President Roosevelt has always been such a sturdy friend of the farmers, that we want a copy of this great picture to be in every American home—especially the FARM AND FIRESIDE home—so we make this offer:

If your subscription has already been renewed for several years, we will send you one of these wonderful ensemble pictures for only one *new* subscription to FARM AND FIRESIDE, at 25 cents (1 year), 50 cents (3 years) or $1.00 (7 years), and you may offer one of the pictures to the new subscriber also, without any extra cost. Remember, you don't get merely one picture, but 500, all on one mounting—a picture which cost close to $1,000—the most remarkable picture that has ever been produced in the world—the greatest triumph of the photographer's art!

This great ensemble picture of 500 photographs is not only the most wonderful picture ever produced, but a remarkable and delightful *puzzle as well.* It will keep every one absorbed and guessing for days.

Remember, for your own subscription or renewal, or for one new subscription, you get absolutely without cost 500 photographs all in one—the most wonderful picture ever made—can be obtained nowhere else—a picture that will be an ornament to your home as long as you live—an almost priceless ornament; and besides all this, it contains one of the cleverest puzzles ever invented. Can be obtained nowhere else on earth. Free with these offers up to March 1st, or with a new subscription.

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gives you FARM AND FIRESIDE 7 whole years—168 big, helpful numbers, the 500 photographs of President Roosevelt, and "The Great Roosevelt" Puzzle.	gives you FARM AND FIRESIDE 3 whole years—72 big, helpful numbers, the 500 photographs of President Roosevelt, and "The Great Roosevelt" Puzzle.	gives you FARM AND FIRESIDE 1 whole year—24 big, helpful numbers, the 500 photographs of President Roosevelt, and "The Great Roosevelt" Puzzle.

Accept one of these offers before the price goes up! NOW is the time!

RUSH THIS ORDER BLANK

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This coupon entitles the sender to the 500 Roosevelt Pictures mentioned above.

Wit and Humor

MRS. DESMYTHE—"Yes, my dear, I intend my daughters to be engaged when they are nineteen."

MRS. LAJONES—"But suppose they are not?"

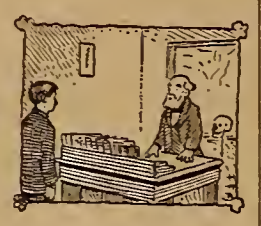
MRS. DESMYTHE—"Then they remain nineteen until they are!"

◈

YOUNG HUSBAND (looking over expense account)—"My angel, the amount of money we are spending for firewood is perfectly terrible. You must do something to prevent that girl from using it up so fast."

YOUNG WIFE (after long thought)—"I have it. When the girl goes out to-night I'll slip into the kitchen and put the wood to soak."

SURE ENOUGH



Professor (to medical student)—"Now if you were called out to see a person, what would be one of the first questions you would ask?"

Medical Student—"Where the person lives."

MR. MICROBE—"Horrible catastrophe! Ten million lives lost!"

MRS. MICROBE—"Good gracious, Mike! What happened?"

MR. MICROBE—"The First National Bank, without a word of warning, sterilized a dollar bill."—Independent.

◈

"It is jolly cold just now," remarked Lushington. "This morning, as I was getting up, I could see my breath."

"How horrible!" shuddered his patient little wife.

◈

MR. HILL—"Miss Short—Isabel—you have been in my office for two years now, and I have learned to love you better every day. Will you be my wife?"

MISS SHORT—"Oh, Mr. Hill, is it fair to ask me to give up a steady position for such an uncertainty?"

It is more profitable to be doing what you intend to talk about—

Than to be talking about something you intend to do

KIND LADY—"Do you love your little sister?"

BOY—"No, mum!"

LADY—"Why not, indeed?"

BOY—"Becos she's my little brother!"

◈

EDYTH—"You ought to have heard Mr. Huggin's ringing speech last night."

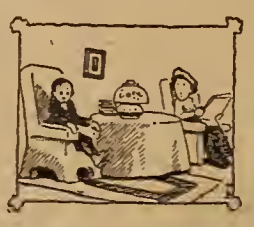
MAY—"Why, I wasn't aware that he could make a speech."

EDYTH—"Well, I can't repeat the speech, but I can show you the ring."

◈

"But," said the lawyer, "your case seems hopeless. I don't see what I can do for you. You admit that you beat your wife."

"Yes," replied the defendant; "but my wife's testimony will discount that. She'd never admit that she was beaten."—The Catholic Standard and Times.



FLEXIBLE TABLE MANNERS

Son—"I had two plates of ice cream at Willie Green's house to-day, ma."

Mother—"But didn't I tell you not to take any when they offered ice cream to you the second time?"

Son—"Well, I didn't, ma, but they offered it to me the third time, and you didn't say anything about that."

HE—"Young Mr. Heavyfoot dances on his toes."

SHE—"I wouldn't mind if he confined himself to his own toes, but he doesn't; he prefers other people's."

◈

TOM—"I hear Fred is married. I always thought he was too timid for anything of that kind."

JACK—"Oh! He married a widow."

TOM—"A widow! Where did he meet her?"

JACK—"He didn't meet her at all; she overtook him."—Chicago News.

◈

IRISH WAITER—"And phwat would yer like for breakfast, sorr?"

TOURIST—"I'd like some poached eggs."

WAITER—"Sorry, sorr, we haven't any eggs; but I think I could get ye a poached salmon from the stream beyant!"

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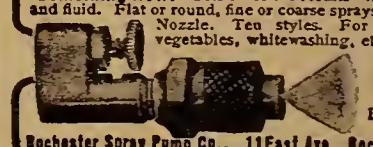

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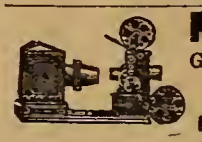

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AGRICULTURAL NEWS-NOTES

A recent report of the Hop Growers' Association of California shows that fifty cents' worth of chemicals are now taking the place of ten balcs of hops.

Now is the time to make your wants known to the congressmen and senators respecting two great needs—the parcels post and postal savings banks.

The egg industry of California centers at present in and about Petaluma, Sonoma County. The egg industry is being rapidly extended throughout the state.

The United States is producing one fifth of the world's whcat; over one third of its manufactures; ncarly two thirds of its cotton, and over two thirds of its corn.

It is reported that a machine has now been made by which flax which has been thrashed in the ordinary way can now be used for the extensive manufacture of linen goods.

The leading states for the production of flax seed are North Dakota, Minnesota and South Dakota. The 1907 crop in these states was about twenty-five million bushels.

Secretary Wilson has given notice that the anti-tuberculosis law respecting the removal of animals infected with the disease, from one state to another, will be rigidly enforced.

The Buff Orpington hen which took the first prize at the Madison Square exhibit, in New York City, was recently sold to a North Carolina poultry raiser for four hundred dollars.

Basic slag is the most economical phosphatic manure for most crops on a great range of soils. It is especially so for pastures and meadows. It has also a decided value as a lime fertilizer. *

◈

"IN THE BACK OFFICE"

a column in FARM AND FIRESIDE that will hereafter be given over to our readers, because we believe that, so far as FARM AND FIRESIDE is concerned, "Our Business is Your Business."

This little corner of FARM AND FIRESIDE that we call "In the Back Office" will be devoted to business talks concerning things that strongly interest the FARM AND FIRESIDE family. We cordially invite you to write us concerning anything that we tell you here, and whatever appears in this space, as in all other columns of FARM AND FIRESIDE, has the guarantee of FARM AND FIRESIDE behind it.

Have you heard about our new Merchandise Payment Department? This is a new business department of FARM AND FIRESIDE to be conducted solely for the purpose of seeing that our subscribers and friends get suitably rewarded for all the subscriptions they send us. Thousands of our good readers induce their friends and neighbors to take FARM AND FIRESIDE, and we believe that these workers in our common cause should be rewarded better than ever during 1908. In addition to the most attractive merchandise payments we shall make our friends, we shall give away *cash prizes* each month. For further information and free catalogue address Merchandise Payment Department, FARM AND FIRESIDE, Springfield, Ohio.

Have you ever realized how much money you save by subscribing to FARM AND FIRESIDE for three or seven years? A three years' or seven years' subscription, as advertised in our offers on page 22, are the best propositions offered by any farm paper in the world. We know it, and when you figure up that at these prices each issue of FARM AND FIRESIDE costs you only six tenths to seven tenths of a cent, you will know it, too. Take advantage of this low price.

It is a pleasure to announce to our readers that we have just made arrangements with "The National Grange," the official organ of the Grange, to offer that magazine one year with FARM AND FIRESIDE three years, all for only one dollar. The regular price of "The National Grange" alone is one dollar, so you are getting a big bargain when you subscribe for this club. See our offer on page 22. "The National Grange" is a farm magazine overflowing with help and interest for every one of our readers.

Have you a good Poultry Book? You can get one—"The Practical Poultry Book"—by renewing your subscription to FARM AND FIRESIDE and adding only five cents extra for postage. This book contains two hundred pages and is excellently illustrated. Its retail selling price is twenty-five cents.

◈

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of the PONY CONTESTANTS will be printed in the February 25th issue.

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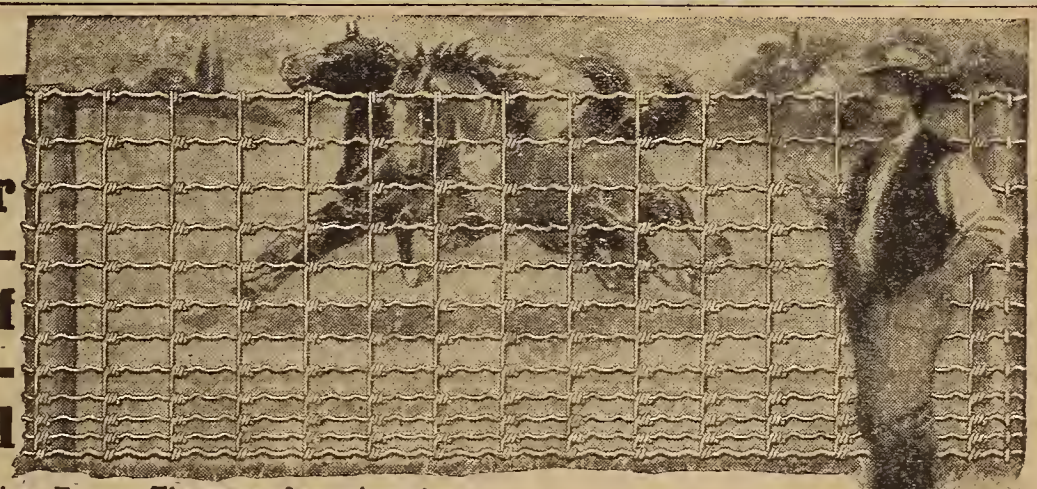

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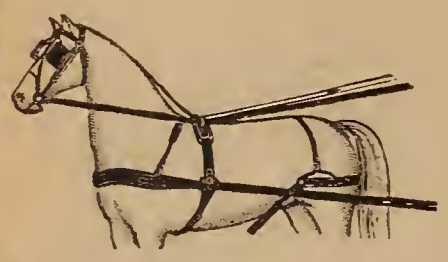

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FARM AND FIRESIDE

WESTERN EDITION

Vol. XXXI. No. 10 SPRINGFIELD, OHIO, FEBRUARY 25, 1908 TERMS—{1 Year, 24 Numbers, 25 Cents. 3 Years, 72 Numbers, 50 Cents. 7 Years, 168 Numbers, $1.00.

Irrigation in Northern Colorado

IT MAY be of interest to the readers of FARM AND FIRESIDE to know that the author of this article is an Eastern man who has spent the summer in an irrigated section of Colorado, and is so situated as to have access to the working forces of the various companies operating in his vicinity, having driven over the systems with the officers and gathered information both in their offices and in the field, and in this article will endeavor to answer the questions that might be asked by one unfamiliar with this method of reclaiming the arid country.

One of the first things that impresses the visitor is the magnitude of this matter of irrigation when viewed from the standpoint of the opportunities for it and the results already achieved. Twenty-

Haygood's Canyon, Wellington, Colorado. Water in the stream among the cottonwoods is carried by siphon of iron pipe across a range of hills and emptied into the Box Elder and from it taken into the North Poudre System

five years ago—a vast acreage of rich valley land covered with cactus and sage brush, on which the prairie dog and coyote reigned supreme, except for wandering herds of cattle now and then, or the flocks of sheep that still travel over the unoccupied territory; to-day—the most wonderful transformation that has come to any country, cities and towns with every modern appliance, splendid railroad service and hundreds of the finest farms in the nation yielding crops unexcelled by any in quality or value. No one can ride to the crest of one of our hills and look over one of these fertile, watered valleys, from fifteen to twenty-five miles wide, a very garden of beauty, without a sense of gratitude for the genius of this great movement that is every day adding to the happiness of home-seeking humanity and to the prosperity of the nation.

It must not be conjectured that this section is entirely devoid of rainfall. Through the months of April and May there is considerable of both rain and snow, so much that the crops all have a fair start, and it remains for the irrigating to tide them over the mid-summer season, during which the rainfall is entirely insufficient.

Main canal of the Laramie-Poudre Irrigation Company now being constructed. Ditch twenty-two feet wide at the bottom. Takes water from the Laramie River across to the North Poudre and down it to the canal heads

Near all the irrigated land there is being practised the so-called "dry farming," which means a more complete cultivation and dependence on the rainfall alone. In a great many cases this is a considerable success, though the yield from the few varieties of crops that can be raised at all is only a fraction of that raised by the aid of irrigation, and a drier season than usual means failure for the dry farmer. Any farmer can appreciate what it means to be able to apply a sufficient amount of water just when the wheat is filling or the potatoes most need it, and this is one of the secrets of the marvelous returns from this witchery of desert agriculture.

SOURCE OF WATER SUPPLY

But where shall water be secured in sufficient quantity to flood whole fields in a country that has insufficient water to keep its vegetation alive? All of this dry plateau lies adjacent to the mountains, and they are the dumping places for all the clouds that come their way, and whose moisture condenses in their cooler air. I can see from my window at almost every hour of the day showers of varying magnitude up in the hills, and sometimes they come so close that I can hear their thunder, yet we have had no rain of value to crops for three weeks.

From the mountains run the long, swift streams that pass through broad, flat valleys away eastward until they reach the Mississippi; from these, at an elevation above the cultivated districts, the water is taken to supply the needy land in the desert country. The cañon cut illustrates well the localities from which these main irrigation canals have their sources. From the bottom of this one a pipe line is to be laid over one of the ranges discharging its water into a creek bed on the other side, through which it will flow along with the water already flowing there, and be taken up from a dam into the canal, and by it for about twenty-five miles to the storage reservoirs, and from there distributed to the land. The main source of supply for this region is the Cache La Poudre River, which has its source in the numerous mountain streams that flow east from the continental divide north and west of Boulder and Fort Collins. From this stream and its tributaries come the canals of the Larimer and Weld, the Water Supply and Storage, the North Poudre, the Mountain Supply, and other minor systems, all operating in this vicinity, while new companies are being organized and their ditches surveyed. One of these systems alone is irrigating thirty-six thousand acres, which will give an idea of the magnitude of the movement.

A mountain stream every particle of which is used for irrigation in the valleys below

The first cost of constructing a system is of necessity very great, and there is a history of numerous failures of meritorious projects, on account of a lack of sufficient funds to complete them. The North Poudre Company, as an illustration, take the water they use from the river, and carry it through a long flume and three tunnels blasted through the rock, then dump it into a cañon, where it runs about three miles, and is again taken up in the main canal, to be carried to the reservoirs. Many feats of engineering mark the effort to get the water from the streams, and then carry it at the greatest possible altitude so as to water the largest possible amount of land. The accompanying cut illustrates the construction of the main canals, most of which are dug by team and scraper, though several steam shovels are now being used. When passing through gravelly soil it becomes necessary to line them with plank, and often, in driving through this country, one will see small patches of land too wet for farming, on account of

Irrigating sugar beets on a hill slope

"seep" from the ditches or reservoirs. The capacity of all these canals is carefully measured and estimated in cubic feet. The Larimer and Weld Canal carries, under full head, eight hundred cubic feet a second, and others mentioned vary from larger to smaller amounts.

RESERVOIR SYSTEMS

If these ditches alone were depended on in the needy season they would fail the farmer by running low about that time, and could irrigate only a small area anyway. To raise their usefulness to the highest degree possible, great reservoirs are constructed, and the water through the spring and early summer stored to such an extent that a vast supply is available and awaits the call of the farmers owning the stock. In a natural valley, at as great an elevation as can be reached by the main canal, a dam is constructed with head gates, and then an inlet also equipped with gates, and the water turned in until this valley becomes a lake of considerable proportions. The Windsor near us holds seven hundred and twenty million cubic feet, and No. 6 of the North Poudre system holds four hundred and sixty million. Connected with one of these systems are sixteen

Striking Feature Next Issue, "Millets For Feed and Forage"

reservoirs; another has twenty-two, and others vary according to the extent of the system. The accompanying cut is of Clark's Lake, selected on account of its more modern construction, and illustrates the manner of building the dikes and controlling the flow of water from the head gates. Some of the dikes are only clay; others are "riprapped" (lined on the water side) with rock, while the one in the cut is riprapped underneath and the upper face lined with concrete. A state law must be complied with in their construction, on account of the danger of their going out and leaving a path of destruction below. The cost of canals and reservoirs mounts to considerable proportions; two of the systems named have cost above a million dollars each, another six hundred thousand, while the annual expenditure for running expenses and improvements is about forty thousand dollars for the latter, and the others in proportion.

WATER IS MEASURED AS DISTRIBUTED

In the distribution of the water to the land a system of measurement and supervision has been devised that precludes any dissatisfaction. In each of the laterals, as the minor ditches are called, measuring weirs are constructed and a careful account kept of the water used by each person; the weir, as may be observed from the cut, is so constructed as to dam the water sufficiently to get an even flow with less current over the apron, where it is measured as to depth. width and speed and the number of inches a second, together with the number of hours running to each person entered on the books of the company. Each company has several ditch riders, whose office it is to patrol the ditches and turn the water out as ordered by the shareholders. The way of distributing the water is by shares of stock in the irrigation company bought and held by the landowner, twenty-five shares, each calling for two hundred thousand cubic feet of water, being usually purchased for each eighty acres of land, and if this should all be used it would mean about sixteen and one half inches over the whole area. In irrigating alfalfa, which is the great fodder crop, about five inches of water is spread over it, and the ground watered about once for each crop, three in a season generally. For grains a similar amount is used, and the ground covered once or twice, as the season demands, which seems a small amount to those unfamiliar with the matter. Sugar beets and potatoes are irrigated twice, and gardens more frequently, as they need it.

WATER IS ORDERED WHEN DESIRED

The work of irrigating is often more tedious than laborious. It takes two men an average of four days to water forty acres, and a man working alone will water from three to twelve acres a day, according to the lay of the laud and the head of water being used. When a farmer is ready to use water, he orders it from the ditch rider having charge in his district, and it is turned into the channels that bring it to him, all of these ditches belonging to the system and being kept in repair by them. As soon as it reaches his land he is responsible for it and is charged with it on the ditch rider's account. The ditches on his own land the farmer constructs according to his own judgment, and also the smaller laterals that carry the water to the points of distribution. The water is carried along the highest part of the field, and a dam constructed in the ditch causes the water to overflow the banks and on down the slope, sometimes watering a strip forty rods long at a time, all depending on the incline of the surface. The dam most used is one of canvas tacked along one side to a pole; this is thrown across the ditch, and some earth thrown on the skirt of it, making a quick and easy method of changing the flow of water from one locality to another. In the cut the incline is greater than usual, and the water is then spread into smaller streams and allowed to run until the ground in the beet rows is thoroughly soaked. The beets are not watered until they average four or five inches in height, and then they respond to the watering almost immediately with a phenomenal growth.

FLOOD-WATER SYSTEMS

This description covers the salient points of the general systems of irrigating. Another method is that of the flood-water systems, several of which are in operation in whole or combined with the general systems. The country is full of dry creek beds, through which the water runs only when there has been a heavy shower on the watershed above; dams are constructed across these at an advantageous point, and reservoirs constructed as in the case of the living streams, then the usual ditches to reach the land below. I visited two of these that the Mountain Supply Company has at Round Butte, near the Wyoming line, and found that they had expended about ten thousand dollars on the venture, and yet it does not produce a supply of water every season, and it would seem a more or less unreliable source of supply with no other backing. A few nights ago a great storm of rain passed north of us, and it no sooner arrived in the locality of the flood-water canals than a company of ditch riders were out, and stayed all night guarding the great ditches and gates through which these torrents are turned into the reservoirs; as a result, one system had a five-inch raise of water in one of its largest reservoirs, and a competing system had eight inches in one of theirs, so if a rain storm doesn't go where it is wanted, it is captured and chained to a system that places it finally where it will do the most good.

IRRIGATION BECOMES A SCIENCE

The future history of irrigation is to be written in large letters; keen brains, wise, strong hearts with the future of a great country in view are making a science of it; capital that was afraid to invest in such costly projects has been won over to the side of the pioneers; there are thousands of acres of the richest land out of doors yet parching in a land of limited rainfall, while there are rivers also untapped wasting their precious floods in rocky beds, and to-morrow they are to be asked to climb out of these beds and wake the sleeping productiveness of a land big enough for a medieval empire. Some idea can be formed of what it means to the commonwealth when you know that land

Measuring weir taken where a ditch comes through a dry field, showing the unbroken and unirrigated land as it is in this section

homesteaded, or bought for less than twelve dollars an acre, in three years has gone to one hundred dollars an acre, and has a rental value to beet culture of ten dollars an acre, and in the production of all kinds of crops congenial to the soil is alike prolific. HOWARD GOLDIE.

THE GOOD FATHER AND MOTHER HE HAD

"My, ain't I glad I have got a better father than Ned has! I've got the best father and mother!"

The little man's eyes were bright and sunshiny that morning; and yet there was an expression on his face that showed that something had happened to stir him up to an unusual degree. We learned about it shortly, for how could the lad help telling the story?

"Ned's father's been giving him an awful scolding! And, pa, it wasn't for anything in the world that I know of. I don't believe Ned has a very happy time. I shouldn't if I was in his place. His father never says anything kind to him. He acts as if he was mad about something!"

Mother and I looked at each other, but did not encourage the boy to say anything further along this line.

"Just be thankful that it is not so with your father, Laddie!"

"Well, I am!" and the good, earnest ring in the voice told the depth of heart from which the words came. "If I didn't have such good folks I don't know but I should do as Ned says he's going to do—No I wouldn't, either! I just couldn't leave my home!"

"And that is what Ned says he wants to do, little man?"

"He told me that himself just the other day. He just said, 'I'm going to dig out.' I'll bet he will, too, before long."

"That would be terrible, wouldn't it?"

Terrible? Yes; but there are thousands of just such terrible cases all over the country to-day. For this is no fancy picture. I can show you Ned. I can take you to the home of the farmer who never has a smile for his children. Who scolds them for a hundred little things that amount to nothing. Who keeps them down with their young noses close to the farm grindstone, and all the while they are just boys and girls, with all the fire and buoyancy of youth, and would not knowingly do a wrong thing if they had half a chance to be right.

I would not like to be thought a preacher to-day. But I will give it as my honest opinion that more boys are driven away from home by their fathers and mothers than we know of. Not that they would willingly do that. Most fathers and mothers think they are doing the very best they can by their children. They want them to grow up good, honest men and women. And they have a notion that the best way to do this is to be very strict with them. Hold them away off at arm's length, give them no chance to be boys and girls, but just miniature editions of old men and women.

In these days there is danger of two things in the farm home. One is that we shall be too lax and the other that we shall be too strict. It is painful to see how many fathers and mothers have no authority over their own young people. There seems to be a great tendency in our times to let the boys and girls do about as they have a mind to. That is not kindness; it is the very worst thing a parent can do. The boy or girl who has not learned the lesson of obedience is on the sure road to trouble.

But there are two ways of teaching obedience. I realize that I am on dangerous ground here. There comes to my mind the case of a young man who in the days before he was married wrote an essay on "Training Up Youth." That paper contained many a learned suggestion for those who have children; but the day came when that man had boys and girls of his own, and they caused him no end of trouble, simply because they had not learned from father and mother the lesson of obedience.

One way to teach obedience is to be obedient one's own self and by example

The dike of Clark's Lake of the North Poudre Irrigation System, showing riprap of rock and concrete, with headgate for control of water supply

and precept and by practise set the pattern for the young folks. Boys and girls know when their parents command themselves. If they do that, they can command their children. What if the young folks see father and mother giving way to frequent outbursts of temper? What if they hear them scold and find fault with everything and everybody? What if they never speak of anything or any one without criticizing them harshly? What if they are always on the lookout for something to scold their boys and girls about? Is that setting a good example?

Self-command is the surest way to gain command of others.

The other way of teaching obedience is to compel it. This is the way some people seem to know best—the only way, in fact. It may be they themselves were brought up by cast-iron rules. And they never really learned what it means to master self.

The best fathers and mothers are not those who are most indulgent. There are worse things for children than knowing what it means to go without some things.

Boys and girls who have learned to control themselves are surest to be happy through life.

There is no danger that children will be injured by smiles and good, kindly, helpful words from father and mother.

Sunshine at home is the great preventive of trouble.

The brighter the home life, the more sure we are of keeping the hearts of our little ones.

Scolding is a sign of weakness in any man or woman.

Shall we forget that the day will come when the boys and girls will be grown up? Happy the father and mother then who can hear their children say, "I never was happier than when in the old home."

The way to be trusted is to trust. When your boys and girls lose faith in you, it is time to stop and ask yourself, "What is wrong in my life?"

God pity the man and woman who wakes up some day to find that their boys have gone from home, and realize that their own careless or indifferent treatment has brought this tragedy about!

God pity the young man or woman who turns his back upon the old home without just cause, simply to get away from restraint!

God give this country better homes, where fathers and mothers and boys and girls are loyal to each other, happy in doing for one another and trust each other supremely! EDGAR L. VINCENT.

PARCELS POST AN AID TO RETAIL MERCHANTS

Several small merchants have "come at me" for my advocacy of a liberal parcels post, declariug that such an innovation would mean ruin for them. They may calm their fears, for the present, at least. This congress is fixed to enact no legislation along that line. It is unfortunate that this great nation should be forced to lag so far behind all other civilized nations of the earth in postal facilities, but the opposition of the express companies, aided by that of the retail merchants, and the chairman of the committee on postal affairs, has settled the matter.

In Germany and England there was quite as much opposition to a parcels post as there is here. But after it had been in operation a short time this opposition died away, and now there would almost be a revolution if it was to be discontinued. Instead of the number of small stores or retail shops decreasing, they have actually increased, the merchants obtaining almost all quick-selling goods by parcels post much quicker and at less cost than by any other method of transportation.

The retail merchants in this country have not been shown the advantages accruing to them in having rapid and accurate transportation of light goods at a low cost. Ruin has been dinged into their ears by the express companies until the bare suggestion of a parcels post almost gives them fits. It is a fact, that every retail dealer should have sense enough to know, that the great majority of people do not like to make out orders for goods. It is to them an irksome task. Not one in a hundred would ever make such an order to a department store if he could obtain the goods for a reasonable price from his home merchant. I have known men to devote a whole Sabbath to making out an order to a department store for goods they never would have ordered if they could have purchased the same at home for prices five to ten per cent higher than those of the department store. Many people would order single small articles, and small repairs for machinery, but all prefer to buy all ordinary supplies over the counter at the village store.

It is unfortunate that the retail merchants have been led to take the view of this matter which they have, and thereby to prevent the adoption of this great convenience by this nation, and deny themselves the quick and safe transportation of light goods at a reasonable cost

FRED GRUNDY.

Good roads remain good
Though ever so wet the weather,
And bad roads stay had
Though everything's dry as a feather
W. J. B.

WOMEN'S INSTITUTES

THE director of farmers' institutes of New York State has arranged for a series of women's institutes to be held in various parts of the state. I attended one the other day held in a neighboring village. The intention is to render to the women of the state the same assistance and service that the farmers' institute renders to the farmer.

Women are somewhat more clannish or inclined to form cliques than men, and less free to come together and discuss questions on broad lines. The new institute is intended to be a wedge to be driven into the isolation and exclusiveness or lonesomeness of farm life for the female population. It may require some effort to arouse the general interest of the country matrons and country lasses. At least the attendance seemed to be small, hardly more than on par with the attendance of the earlier farmers' institute meetings. The great increase of numbers in attendance at the farmers' meetings, however, inspires the hope that the "better halves" of the rural population will, after a while, flock to these meetings in correspondingly increased numbers.

It is not every woman that can go to a school of domestic science; nor will many be able to gather much from books. It is the dear school of experience that the great majority have to graduate in; "there is many a little grave on the hillside" for which there would not have been any need but for the lack of experience and knowledge of the mother. These women's institutes will answer a useful purpose by allowing an interchange of ideas and knowledge gained in the school of individual experience.

BALANCED RATION FOR THE FAMILY

Much stress has been laid at the farmers' meetings in recent years about the need of a "balanced ration" for the cow and other farm animals, down to the hen. Why should the women not be told about the balanced ration for the family? Are these things which have such vast influence upon the health and thrift of farm stock less worthy of consideration as a factor in the health and well being of men and women and children?

Miss Gertrude Gray of the School of Domestic Science of Toronto, Ontario, attempted to explain some of the leading points and principles, and finally gave a practical demonstration of fine cookery. I agree with her in regard to the balanced-ration proposition in a general way, although the natural and uncorrupted appetite of a normal person is usually a pretty fair guide of what that particular person needs in the way of food. But I thoroughly disagree with her and other expert cooks in regard to certain matters in the preparation of food materials.

MODERN COOKERY

I believe that our great cooks and our cook books and schools of domestic science are making an altogether too complicated, too scientific, too elaborate mess of our cookery. I believe in simple meals, the simpler the better. A healthy person will have a good appetite and be able to enjoy a plain meal, skilfully prepared and tastily served. Our modern cooks and compounders of mixed messes have gone by a good deal too far in their eagerness to coax the appetites of those to whom they cater with highly seasoned and overenriched and compounded viands, to the detriment of their digestive capacity; and therefore general health. We have plenty of good, plain and wholesome dishes that appeal pleasurably to our palates. Variety may be desirable, but there should not be too much of it at any one meal. With plain food, eaten in moderation, we and our families will feel better, enjoy life better, and live longer. Cooks often forget that.

T. GREINER.

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PLAN OF HEATING HOUSE

Charles Barnard's article in FARM AND FIRESIDE of January 10th, "Save Money by Saving Heat," was very interesting to me, from the fact that I have the same arrangement in my two-story brick dwelling house, and have used it for the last three years. I can attest to the correctness of the principle.

I use an air-tight, sheet-iron wood stove in my cellar, with a galvanized steel jacket, with a three-inch space between the jacket and the stove. The jacket sets on a brick-and-cement foundation.

I have hot-air pipes from the heater to a register in the parlor, also to the hall and sitting room downstairs. The air that is heated for the lower rooms passes down through a cold-air register, in the side of the room opposite to the hot-air register, to a passageway under the cellar floor to the heater, then is heated and goes back to the lower rooms.

Instead of an eight-inch pipe from the cellar to the upper room, I use an eight-by-ten-inch galvanized steel flue placed near the brick wall and enclosed by four light studding, lathed, plastered and papered to match the walls of the room, doing away entirely with unsightly stovepipes in the parlor.

The stovepipe from the heater passes up through the eight-by-ten-inch galvanized flue into a drum in the upper room. The drum is a sheet-iron wood stove with a collar underneath at one end for the stovepipe. The end of the drum is directly over the eight-by-ten-inch flue. The stovepipe from the drum enters a brick flue built from the upper joist and going out at ridge pole.

The whole arrangement is very satisfactory and in cold weather will heat comfortably warm the whole building of two eighteen-by-eighteen-foot upstairs rooms with ten-foot ceiling, two rooms downstairs of the same size, and a hall. The amount of fuel required is very small. The advantages over the arrangement described in the January 10th issue are: Doing away entirely with unsightly pipes in the parlor; greater air space from cellar to rooms upstairs; drum upstairs over the eight-by-ten-inch flue radiating heat very rapidly, and saving the expense of building a brick chimney from cellar to upper joist.

Ohio. H. C. DIETERICK.

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TEST THE SEED CORN

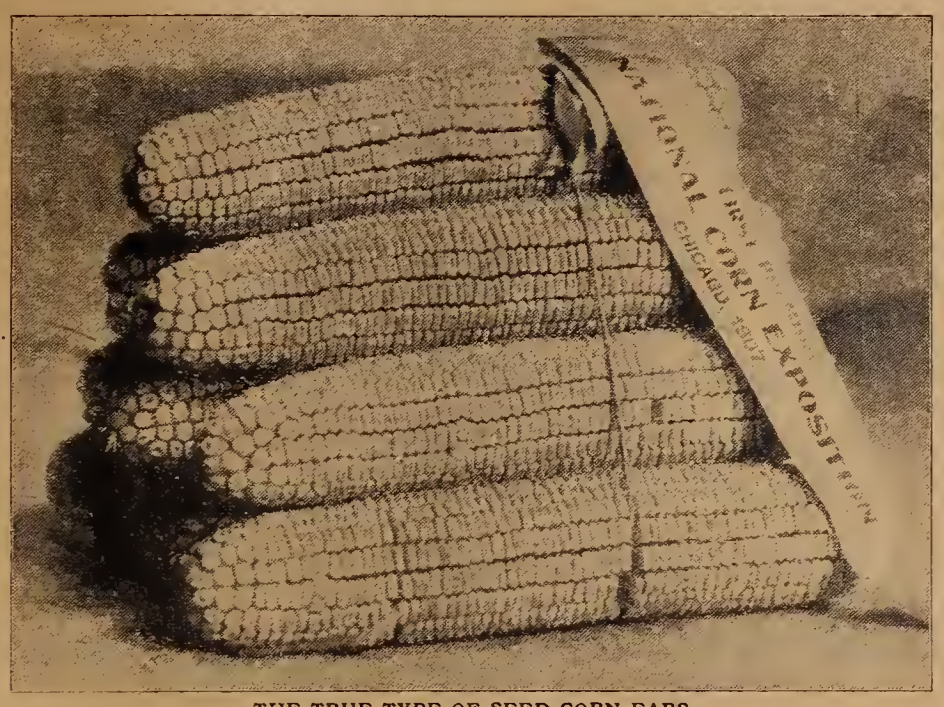
I noticed an article in FARM AND FIRESIDE, entitled "Securing a Full Stand of Corn," in which it was advised to plant thickly, and afterward thin to the desired number of stalks, and replant if any stalks were missing. No doubt this will secure a full stand, but I have a plan that will do away with the extra work of replanting and thinning.

We select our seed corn at husking time, then fasten eight or ten ears on a piece of binder twine, and hang them in the barn loft or other convenient place. This allows it to dry thoroughly before freezing weather, and is also out of the reach of rats and mice.

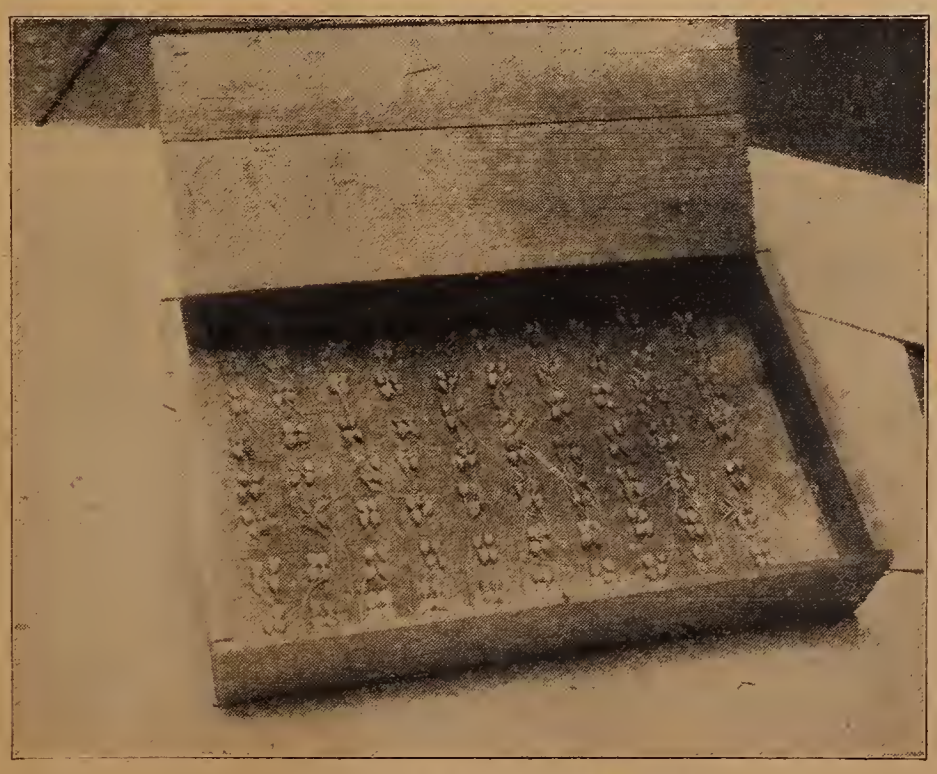
In March or April, when we get ready to test it, we place the ears in a row crosswise on the floor of a room in the house or some place where mice will not molest it. We number each ear, or remember which end of the row is No. 1. Then we take a box about two by three feet and four or five inches high, and fill it half full with thoroughly moistened sawdust or earth, and make it perfectly smooth on top. On the sawdust we place a white cloth that has been previously marked into squares of two inches with a lead pencil. We number each square in the box. We then take ear No. 1 and remove three grains from one side (one from near the butt of the ear, one from the middle and one from near the tip), then turn the ear over and proceed as before. We place these six grains in square No. 1, and so on until the box is filled. This will test about two hundred ears. We place another cloth, a little larger than the box, on the kernels, and cover with two inches of moistened sawdust or earth. When the sprouts are about half an inch long we remove the cover and discard the ears the kernels of which have not germinated or have shown a weak germination.

This plan may seem theoretical to some, but we have tried it and proven that it pays. One man can test enough in one day to plant ten acres, and the crop will be increased at least five bushels an acre. This would be fifty bushels of corn for one day's work. Would it not pay you?

JOHN STEIGER.



THE TRUE TYPE OF SEED-CORN EARS



BOX FOR MAKING EAR TEST OF SEED CORN

Each square should be numbered to correspond with the ears of corn from which kernels were taken. By this method of treatment the ears from which kernels will not germinate can be thrown into the feeding bin. Only seed ears of strong vitality should be used for the season's crop

Farm Management

HOW LARGE A FARM?

J. Rooney, Sauk County, Wisconsin, gives his experience with a farm of one hundred and twenty acres and with one of fifteen acres. He is an invalid, having been confined to his bed for nine years and unable to work for twenty-two years. The farm of one hundred and twenty acres formerly paid a profit of one hundred dollars, after allowing a very modest sum for his own work and that of his wife. This farm was sold twenty-two years ago and the smaller one purchased. Here are his sales for the past two years:

1906.	
Red raspberries, one acre	$249.75
Strawberries, four rods	5.75
Cherries, twelve trees	22.00
Plums, two trees	16.00
Potatoes, one acre	90.00
Hogs	51.00
Butter	84.00
Eggs	48.00
Chickens	20.00
Apples	149.00
Sweet corn	10.00
Grapes and garden truck	25.00
Total	$770.50

1907.	
Currants	$ 41.79
Red raspberries	183.87
Potatoes	3.18
Sweet corn	25.55
Garden truck	25.00
Grapes	5.00
Pork	37.00
Apples	87.40
Chickens	30.00
Eggs	60.52
Butter	106.60
Total	$605.91

The labor bills amounted to $305 in 1906, and $254 in 1907. There is no family help except that of his wife.

They have two cows, two heifers, one horse, five shoats and about one hundred hens, and have produced more than enough rough feed to keep them.

This letter and these records afford an excellent illustration of the possibilities of the small farm. Here is a home which probably cost no more than the same house would have cost in any good-sized village or small city with only land enough for it to set on. In the country this home, with its fifteen acres of land, not only furnishes all which the city house would furnish in the way of a home, but also supplies the opportunity of gaining a livelihood in connection with it. How much this means few can appreciate except those who are dependent upon their daily toil for their support; and who must look to others to provide the opportunity to use their labor. The ceaseless round of daily service from whistle to whistle, unenlivened by personal interest in the outcome, which characterizes the work of so many men and women, finds no place in such an undertaking as this. The daily toil is there, but how different from that of the one who is merely working under the direction of another, or, still worse, under the direction of an organization or a system! Small wonder that so many city dwellers read with such intense longing of the home on the farm and the things which surround it.

Some one is anxious to say that this return is very small, that there is no chance of acquiring riches in such an undertaking. True enough! When shall we ever learn that making money is not the only measure of success nor the highest one? Here is an income, small in dollars, but large enough to supply a physically helpless man and his wife with all the essentials of life. What percentage of mankind secures more? The dollar, even on a purely financial basis, is not a correct measure of comparative income in city and country. The dollar in such a home as this means far more in the way of the comforts which it will supply than does the dollar in the home of the city workman. This difference neither can fully appreciate, especially the occupant of the farm home.

It is hardly necessary to contrast the farm of this type with the large business venture in agricultural lines. It is not that one is a better type than the other, for both are best for certain conditions and certain men. The man with small capital who prefers to work largely within himself can find the opportunity in an undertaking of this kind. Far more men can reach this type than the other. It carries with it less of anxiety and annoyance and perhaps even more of comfort and contentment. But for the man with business tastes, who likes to manage men and affairs, and who can command the capital to do it, there is ample scope in the larger field. Few men have the ability to manage large enterprises, but the one who does can employ it in agriculture as well as in other lines.

FRED W. CARD.

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Review of the Farm Press

GREEN MANURING

Green manuring, or the plowing under of green crops, is of more than recent origin. This method of maintaining and increasing the productivity of the soil has been practised with unvarying success for a great many years.

The object of green manuring is to add humus or decomposed animal or vegetable matter to the soil. In general, the best crop to use for this purpose is the one which furnishes the largest amount of material which will readily decay in the soil.

There are several other considerations which enter into the choice of a crop for green manuring. For instance, deep-rooted plants are preferable to those having only short roots, owing to the fact that they enter into the subsoil, thereby allowing water and air to enter and preparing a better seed bed for every farm crop grown. The legumes, such as the clovers, alfalfa, cow peas, soy beans and the vetches, are more valuable for green manuring than many other plants, for the reason that they add humus to the soil and at the same time lock up nitrogen from the air for the future use of the crops.

Of course, in general the practise of green manuring cannot be recommended except in extreme cases. Poor soils, which need an improved physical condition, require green manuring. On good soils, in which the physical conditions need no repair, and in which there is neither need for humus or nitrogen, green manuring is an unnecessary expense; the objection being in the fact that the green-manuring crop must take the place of the regular crop, thereby depriving the farmer of the income from his land for one season. In extreme cases, however, where humus and nitrogen are lacking, and cannot be supplied by regular practises, green manuring is necessary and in every way beneficial.

The use of the clover in the farm rotation will form an adequate substitute for green manuring. All members of the clover family have the ability of fixing nitrogen in the soil. As will be seen by the accompanying illustration, most clover plants have nodules on their roots. These nodules, or tubercles, vary in size and shape according to the kind of plant. On red clover they are more or less round, and relatively small. It is the assumption and belief that these tubercles contain the nitrogen which the plant has taken from the air. The tubercles are caused by a certain kind of bacteria.

Until any soil has become well inured to the growth of legumes, a notable absence of root tubercles is found. A very common practise to-day is the scattering of soil from a field which has grown some legumes for a period of time. It is believed that this practise will inoculate the new field and that the crop will be grown with ease after this application. It is a common belief that sweet clover, a common roadside weed, will properly inoculate any soil for the growth of the legumes. This weed will not stand cultivation and is found only in uncultivated fields and along the roadsides. It is a

A SPRIG OF HAIRY VETCH

splendid rooter—its roots going down into the subsoil. It will thrive in the poorest of soils and under every form of neglect. Its value as a crop for green manuring is readily shown by the experiment conducted at the German Agricultural Experiment Station. Sweet clover was sown one spring upon a piece of land, with the result that on the plats where this crop had been grown 1,645 pounds of oats an acre were harvested, in contrast to the yield of 1,099 an acre where sweet clover had not been used. The general use for sweet clover in Wisconsin is merely for the development of soil bacteria. The various vetches are similarly used for green manuring. The common vetch is a good resistant of cold weather, being much more hardy than many of the other annual legumes. There is the same objection to this plant that there is

COMMON SWEET CLOVER

to sweet clover, and that is that it is weed-like in character, it being more capable of usurping the land than its relative.—The Wisconsin Agriculturist.

WELL-KEPT FARM BUILDINGS

There is nothing that makes farm life more attractive and enjoyable than well-planned and neatly kept farm buildings. There is no question but that thousands of farmers' sons and daughters have left the farm because of the ill-kept and ill-planned farm buildings. One of the alluring things of the city is its well-kept residences, filled with all the modern conveniences. They are, in many cases, provided with bath rooms, heated with furnaces, lighted with gas or electricity, hot and cold water brought into the house, and other things that serve to make their inhabitants comfortable and contented.

There is a movement among the more progressive farmers of the country to make their homes just as attractive and comfortable as those of their city brethren. This is right. There is no person or class of persons on earth who should have more comfortable dwellings than the farmer. He works hard, and therefore is entitled to the richest comforts of life.

In a well-arranged house, supplied with modern conveniences, the work of the housewife is less, and more enjoyable. And so it is with the farmer. If he keeps his barns in good repair, makes them modern and convenient, lighting them with plenty of windows and ventilating them properly, there is satisfaction and comfort in carrying on the work of the farm.

The kind of buildings that are on the farm has much to do with making the farmer and his family contented, and the strength and permanency of our government lies in a contented and prosperous rural population. Let us build modern homes and modern barns, and then keep them and their surroundings neat and cheerful.—Hoard's Dairyman.

FORMALIN FOR OAT SMUT

The spores causing oat smut adhere to the seed and are sown with them in the field. If the seed oats are treated with a solution of formalin before they are sown, the disease can be very largely prevented. Formalin can be bought in a liquid form in a forty-per-cent solution under the name of formaldehyde.

TREATMENT OF SEED

Select a tight floor in a barn, granary or house, sweep it clean, and wait until the dust settles. Then put down a layer of seed oats, say one and one half inches thick; make a dilute solution of formalin by putting one pint of the forty-per-cent solution in forty-five gallons of water. With a hand sprinkling pot thoroughly sprinkle the layer of oats and shovel them over until every seed is moistened by the formalin. Put down another layer of oats, sprinkle, and shovel over again. Perhaps three or four layers may be treated in this one pile, but when the oats get deeper than five or six inches it will be best to remove them and begin a new

RED CLOVER ROOTS SHOWING NODULES

pile. After a lot of oats is treated they should be covered with a sheet, to keep off the dust, and stirred occasionally, to prevent heating and facilitate drying. When dry they are ready to be sown.—Mississippi Station Bulletin No. 102.

When You Buy a Cream Separator

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You would rather buy a cow with a **record to show** what she is able to do—than to chance your money on a scrub, even though the record cow would cost a little more.

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is guaranteed—your money back if it does not do as we claim.

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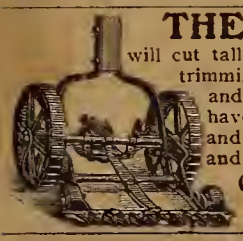

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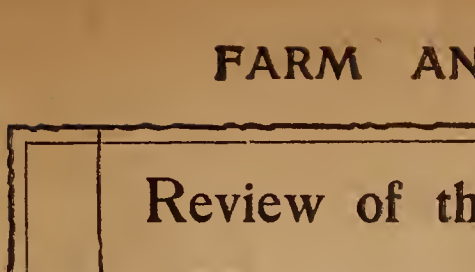
Review of the Farm Press

AGRICULTURE IN THE COMMON SCHOOLS ABROAD

AGRICULTURAL education in our schools is gaining in favor; but the United States is no pioneer in the movement. The idea has been put into practical operation by many of the most progressive foreign governments, and to its influence is attributed, in a large measure, the excellent farming and gardening ability of many of the immigrants who come to our shores.

In France a feature of all the normal schools is the school gardens and nurseries of fruit trees. There is a course of agriculture in the normal school for men, and of horticulture for women, and the instruction received by teachers in the normal school is applied in the school gardens especially throughout the country. The system was begun in 1882.

In Russia small farms and gardens are being attached to the people's or elementary schools in many villages. As a rule the community gives the land free. In one province in southern Russia over three hundred of the five hundred odd schools



BOX COOP

possess small model gardens, divided into sections of grain, vegetables, fruits and trees important in silk culture. In 1905 these schools collectively cultivated four hundred and five acres, including vineyards, and possessed over twenty thousand fruit trees and over fifteen hundred bee hives.

In Switzerland there have been school gardens for twenty-five years, both in connection with normal and elementary schools. The Swiss government encourages them by awarding prizes for the best results.

In little Belgium the study of horticulture in the schools is compulsory. A royal decree of 1897 lays especial stress on the cultivation of vegetables; the consequence is that almost every young Belgian is a gardener. All public elementary schools in Belgium have gardens, and the government grants annually six thousand francs as prizes among the pupils who have excelled in this department of study.

Sweden takes the lead in the matter of school gardens abroad, having established them in 1869. In 1900 there were over five thousand in existence. At the present time great attention is also being given to instruction in manual training.

In Austria there is a widely extended system of school gardens, which has greatly stimulated fruit culture, especially in Bohemia, through their influence.

In Germany, while the matter has not been regulated by law, for nearly thirty years certain portions of the empire have had school gardens, and the German teachers give practical lessons to their pupils in horticulture and plant growing. Many German cities have gardens connected with their elementary schools, while they are a common feature of the high schools throughout the empire.

Even little Nova Scotia has a farm set apart for school gardens.—The American Cultivator.

◈

VALUE OF TILE DRAINING

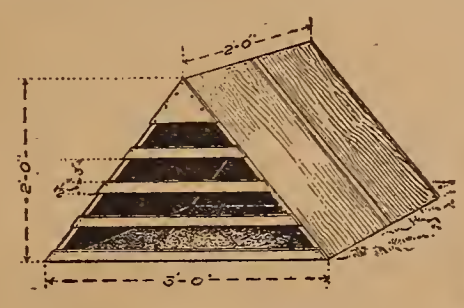
The farmer that invests money in tiles for drainage purposes is placing that money where it will bring him a sure interest every year. The more we travel about over the agricultural lands of the Middle West, the more are we impressed with the idea that much money can be made by many of our farmers by paying more attention to the drainage of their lands.

The work of tile draining the lands has been done in spots. In certain localities the farmers have taken kindly to the idea of investing money in tiles, and considerable areas have been tiled. There are other areas, however, in which not a single farmer has put tile in his land, though much of the land needs this kind of treatment. After many years of agitation of the subject we might expect to find all of the land naturally wet properly tiled. This is not the case, and the neglect of this improvement in some localities is a surprise to those in touch with tile-draining operations. Moreover, the lack of tile drains is not generally due to the poverty of the farmers, but to the idea prevailing that the land is all right as it is.

There is a mistaken notion prevailing that if the land in a low place dries out by the middle of spring it is not too wet to produce good crops. This is not the case, for such land becomes water logged at every rain and loses its surplus water principally by evaporation. It is difficult to grow rank crops on such land. If one will but keep watch of such areas he will notice that none of the crops attain such size as they do on the higher land, and this is due mainly to the fact that water, being in too great abundance, interferes with the nutrition of the plant. All plant food is taken in the form of a liquid. When the soil is in proper condition to give the plants the best kind of nourishment, the soil has in it water enough to coat the soil particles, but not enough water to fill the spaces between the grains of soil. That film of water is rich in plant food, and the plant food is conveyed by that film of water into the plant. But if the water is in the soil to such a degree that the spaces between the soil particles are filled, the plant food is diluted many more times than it should be. The plant can take in only a limited amount of water, and therefore the amount of plant food that can be taken up in a day is greatly reduced. Sometimes, by the soil water being in too great abundance, the plant is able to take only twenty per cent of the amount of plant food it would receive if the moisture were only sufficient in quantity to keep up the capillary action.

The draining has therefore a much greater value than even most of those that use it appreciate. It even pays to tile hillsides where the soil is composed of a heavy clay. Very often hillsides are wet, especially when the hills are large and small springs are found at their bases. Frequently the springs have their origin well up on the sides of the hills, but percolate through the soil instead of making an open channel over it. When the soil is of a clayey nature, this water renders it springy far above the base of the hill. Many a farmer has reported excellent results from tiling such hillsides.

The tiling of land not only makes an outlet for the too-abundant soil water; it also lets in the air, and this warms up the soil in the spring. The air at that time is much warmer than the water in the soil. Water is a non-conductor of heat, and so long as it is in the soil it resists the entrance of the heat in the



A-SHAPED COOP

air above it. To get this heat-resisting medium out of the soil and let the warm air in is reason enough for thorough drainage operations. It not only helps the soil to warm up earlier in the spring, but keeps it warm until late in the fall, in spite of the coming of the fall rains. This is very helpful to the crops sown in the fall.—The Farmers' Review.

◈

COOPS FOR HENS AND CHICKENS

The simplest coop is the common A-shaped coop. It is quickly and easily made. This coop may be made either with or without a floor. A floor is desirable, except during warm weather and where the soil drains quickly.

Another good coop is the box coop, which in some respects is preferable to the A-shaped coop, for in the latter the hen can stand upright only near the middle of the coop, while with the box coop the entire floor space is available for her and the chickens. The box coop is also more easily cleaned.

If desired, a small covered run can be made for each coop. This is especially desirable if there is danger of losses from cats, hawks, etc.—Farmers' Bulletin No. 287.

◈

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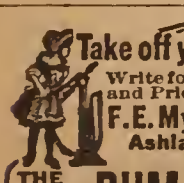

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Other Seed Advertisements on Page 23

Gardening

BY T. GREINER

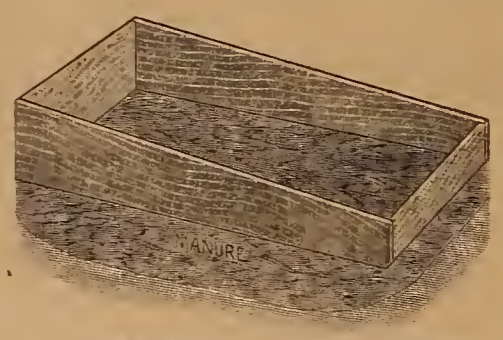
Early Plants in Hotbed

A READER in Jefferson County, Pennsylvania, asks me to tell him how to make a small hotbed for raising early plants, and at what time the seed should be sown.

From my own earlier experience I know that much can be done in the way of raising the plants needed for the home garden even with a single-sash hotbed. It will always pay to use a good sash, one that is light, yet well made, and will shed water well, and admit as much light as possible. The ordinary sash as made for this purpose is about three feet wide and six feet long, or a little less. One of these will do very well for a beginning.

I would not advise any one living in the colder parts of the country (New York, Pennsylvania, Ohio, Illinois, Indiana, Michigan, etc.) to put much reliance on cloth-covered frames for early plant growing. In my experience even the best plant cloth prepared commercially for this purpose has proven unsatisfactory and disappointing. With me it is glass or nothing.

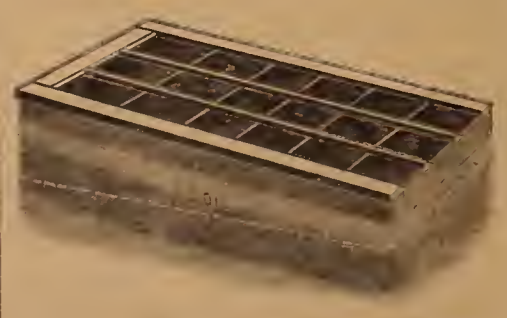
The size and number of sashes available in each case, of course, determine the size of the hotbed. For a single-sash hotbed I would make the excavation for it larger all around than the size of sash, say at least four feet wide by seven feet long and two feet deep, and fill this about even full or higher with well-prepared but rather fresh horse manure containing strawy litter that is well soaked with urine, or dry forest leaves that have been used for bedding. Sheep manure with plenty of bedding may also be used for this purpose. The addition of spent hops, when obtainable at a near brewery, will be found especially useful in maintaining an even and moderate heat in the manure. Horse manure alone, however, is probably used in the majority of cases. Throw it



PLANK FRAME ON TOP OF MANURE IN EXCAVATION

in a heap, to have it come to a heat, and then fork it over once or twice, always putting the outer, cold portions of the manure well inside, so every bit of it has a chance to become well heated through. Place this material evenly into the excavation and pack it well down. Make a strong frame of plank (one-inch boards will do for a frame of this size) to fit the sash, and place this frame on top of the manure, in the center of the excavation.

More manure may be filled in around the frame, and this covered with some of the soil thrown out of the pit, packing it down well and giving it a good slant, so as to shed water away from the frame. Put on the sash, and leave it thus for a while until the manure in the pit

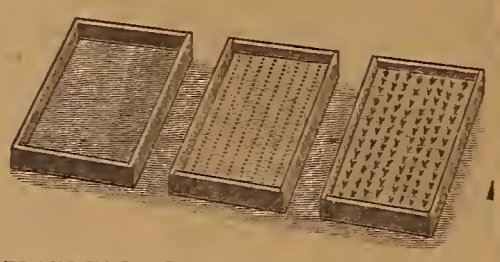


HOTBED READY FOR SOWING THE SEED

has again come into heat. You are then ready for sowing the seed. For the best results, all these preparations should be made at the first opening of spring, here usually in March, or if winter lingers long in the lap of spring, perhaps not much before the first of April.

In case of an abnormally late spring it would be advisable to start a few plants, such as tomato, pepper, eggplant, and possibly early cabbage, etc., in a box or boxes in the kitchen window. Two weeks can easily be gained in this way, not only in getting the plants started, but in the maturity of some of these vegetables. Then when the hotbed is ready, and as soon as possible after the young seedlings have formed their first true leaves, transplant them into other boxes or "flats" and set these into the hotbed.

Usually we cover the manure of the hotbed a couple of inches deep with loam or sand, or even sifted coal ashes, and set the flats close together on this foundation. Or we place a layer of good loam on the manure, to the depth of five inches or so, and sow the seed or set the plants into this. At any rate, we like to have



FLATS IN WHICH EARLY SEEDLINGS ARE STARTED AND TRANSPLANTED

the surface of the soil, whether in boxes or otherwise, not more than three to five inches below the glass at first. Later in the season the manure will most likely pack and let the surface sink lower, and this will give the depth that will be needed for the tomato and pepper plants after they have grown to some size.

In a general way it may be said that seeds of all kinds that we start under glass should go into the soil as early in spring as we can get the hotbed ready. However, if we care to start such things as melons, cucumbers or squashes under glass, in boxes or on pieces of inverted sod, we can be too fast about it. The right time to sow seed of these plants is about six weeks before we can calculate on setting the plants out in the open. I seldom resort to this practise. If I do, I plant the seed early in April. Celery plants of the early kinds—especially Golden Self-Blanching, may be started in a flat in a warm spot in the cellar, or in a window in the house, in early March, and the flat transferred to the hotbed as soon as ready, to be kept there until the young seedlings may be pricked out in sections, and thus transferred to the nursery or plant row in the richest spot of the garden as soon as the land can be properly prepared.

In short, with the help of a single-sash hotbed we can manage to raise an abundance of good plants for the home garden, and in fact much better plants than we are often able to purchase. This plan gives us control over the selection of varieties, instead of having to leave this to the professional plant grower, or of having to take our chances.

For ventilation in warm and sunshiny weather the sash may be tilted, or, especially in the earlier part of the season, just moved a trifle sideways or cornerways, so that there are openings, larger or smaller, according to weather, at the corners.

◈

RAISING ONION PLANTS

I emphatically advise every home grower, as well as every gardener who grows vegetables for a retail trade, to make at least a trial of what is known as the new onion culture; but I do not advise any one to start in with an acre, or a half or even a quarter acre, unless he has at least some practical knowledge of the task he undertakes. It is quite practicable to start some of these onion plants of the large sweet Spanish varieties in a box or flat in a sunny window, but it will be advisable to set the box or boxes into a cold frame in March, in order to give the plants a chance to grow strong and straight and to become properly hardened.

An Illinois reader who has two rooms sixteen by sixteen feet, with three large windows in each, and having a steady temperature of forty to sixty degrees Fahrenheit, proposes to use them as a place to raise onion plants, supposedly in flats, for setting an acre. For reasons already stated, I would not advise him to attempt it on that scale; but it is quite feasible to start plants in that way, leaving the flats for four weeks or even longer in the room until the plants are up and well established, and then taking them out and setting them in cold frames.

The greatest danger is in allowing the plants to stand or remain too thickly in the flats. From two hundred to two hundred and fifty on a square foot of surface is about all we should allow.

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Fruit Growing

BY SAMUEL B. GREEN

HOW TO SECURE PINE SEEDLINGS

F. J. B., Blackduck, Minnesota—I am inclined to think that the best way for you to secure the plants you want for starting a white pine grove on your farm is to pull the white pine seedlings in the woods in places where they may be abundant. It is quite common to find them very thick in portions of the section in which you live. In preparing for this planting, it is important that you plant only on land to which you can give fire protection. It is hardly worth while to go to the expense and labor of setting out pine trees on land where they would be destroyed by the first ground fire.

With a little searching on your part I think you will have no difficulty in getting the ten thousand white pine seedlings that you would need for your ten acres of land, and I believe you can get them in this way much cheaper than to raise them, and then, too, you would save the delay incident to the raising of seedlings. It would require at least two years to grow the seedlings in the nursery before they would be large enough to set out.

The important thing to remember, in gathering any of the seedlings of cone-bearing trees, is that the roots must be always moist. On this account, if these are to be pulled from the woods, the roots should be immediately covered with moss, water, wet sacks, or in some other way protected.

◈

PLANT LICE ON CHERRY TREES

R. S., Auburn, Washington—The black plant aphis or lice which are commonly found on cherry trees are often extremely troublesome and hard to combat, since the foliage of the cherry tree is quite sensitive to some of the compounds generally used for spraying.

I think, however, that for small trees you will find it most satisfactory to smoke the trees. For this purpose the tree should be covered with a tent, and tobacco stems that have been moistened placed in an iron vessel (an old coal hod will answer the purpose). When the fire is started, great care should be taken so that the stems do not blaze up and give out much heat, if any, since if the stems blaze the heat is liable to injure the foliage. The tent should be filled with dense smoke.

For large trees this is out of the question, and in fact spraying of any kind is a difficult proposition for them. Where winter spraying with lime-and-sulphur wash is used, the eggs of the lice are destroyed, and this is quite a satisfactory treatment. Where this cannot be done or seems impracticable, it will be found that strong tobacco water applied in summer is quite a satisfactory remedy. To apply this, take a handful of tobacco stems and scald them with perhaps two quarts of water, and get a decoction about the color of strong tea. This can be used with safety on the leaves of plants, but should not be allowed to stand more than a few hours, as it changes by fermenting.

◈

CRANBERRIES IN TEXAS

A. P. C., Burnet, Texas—Cranberries have not proven a success in the Southern states. This plant seems to be especially adapted to a cool climate, and the hot, dry summers of the Southern states are very injurious to it.

◈

ROSE BUGS ON GRAPE VINES

J. H. C., Montague, Massachusetts—Rose bugs, I know, are very destructive in some parts of Massachusetts. With the Concord and most of the other hardy sorts that are grown in your section you could follow the plan of bagging the clusters of blossoms before they opened. It has been found, however, that spraying the vines with Bordeaux mixture, beginning just before the flowers open, and continuing until the grapes are well formed, is a considerable protection against rose bugs, and is often satisfactory.

◈

RENEWING A LAWN

J. C. J., Augusta, Maine—In my opinion, the way in which many people cover their beautiful lawns with a lot of barnyard manure, and let it lie from mid-autumn until pretty well into the spring, is disgusting, and there is no need of it, so far as any benefit to the lawn is concerned. I think very fine, well-rotted manure can be used occasionally on a lawn to good advantage, but that generally a coating of half an inch of rich, black loam will give better results than average stable manure, especially if the latter is not thoroughly decayed and lies in piles on the lawn.

On our lawns, here at the experiment station, I have followed this plan of putting on black loam, and it is also the plan in some of the best parks in this country, and has given good results. In addition to this I occasionally use an application of tankage, applied at the rate of about one thousand pounds to the acre. This stuff costs about twenty-five dollars a ton, and fifty or one hundred pounds are sufficient for an ordinary city-lot lawn.

There can probably be no question but that an occasional application of well-rotted manure is beneficial, by reason of its furnishing a new set of ferments in the land. If the plan I have outlined is followed, the loam should be applied late in autumn, and in the following spring should be raked a little if it forms a crust, and then new seed may be added in the vacant spots, and the lawn thus kept in good condition.

◈

THE NORWAY POPLAR

E. N. Co., Sturgeon Bay, Wisconsin—The so-called Norway poplar is a form of cottonwood which has come to us from Europe. I have not been able to run down the source of its introduction, but think it appeared first in Minnesota. It is closely allied to the Carolina poplar, but is, if anything, of more rapid growth, and I think is fully as good as, if not better than, that tree for general windbreak planting. The foliage seems to be quite immune from the leaf rust, which is so commonly injurious to cottonwoods. I think it well worth trying.

In my opinion, neither the Norway poplar nor the Carolina poplar is deserving of use as street trees in any section of our country, since we have so many trees that are better adapted to street purposes. But for quick-growing windbreaks and for use in farm forests these quick-growing poplars are valuable. In many parts of the Middle West cottonwood lumber is being sawed and used for a variety of purposes, such as planks for barn floors and for cheap box veneers. The grain of the Norway and Carolina poplar wood is quite clear and firm and superior to the average cottonwood.

◈

GRAFTING THE PEACH

W. H. H., De Land, Florida—While grafting the peach is possible in the South, it is so uncertain as almost never to be practised, and June budding is practised almost exclusively, while in the North late summer budding is the general practise.

I do not think you would gain much by trying to work over your old trees with new varieties. I am inclined to think you would get far better results to start with new plants. If you feel that you must make some use of these old trees, I would suggest that you cut them off at the top of the ground and then June bud on the sprouts. In this way you will probably get far better results than to attempt to graft them. On account of the exceedingly brittle character of the peach wood it does not graft easily.

◈

SEEDLESS FRUIT

J. L. G., Pittsburg, Pennsylvania—Seedless fruits occur occasionally. There is no known way of producing them. We simply know that from a large number of seedlings we may occasionally get a new fruit that has no seeds at all. This is true in the case of the seedling orange, which was introduced into this country from Brazil, where it was found growing by the American consul, and it has always been propagated by budding or grafting. Occasionally these seedless oranges may produce a few seeds, but practically they never do.

Other seedless oranges have been grown from seed. The whole orange would not grow if planted in the case of a seedless orange, as there is no germ from which the new seedling could start. An interesting thing in connection with this is the fact that sometimes from the seed of an orange more than one seedling will start. In this case only one seedling should be looked upon as the product of crossing, either naturally or artificially, and the others should be regarded as coming from adventitious buds which have been formed in the seed.

There are a number of other seedless fruits, included among which are the seedless raisins and the common black currant of commerce, which is a small seedless grape grown in southern Europe, known as the Zante. The banana, the pineapple and sugar cane are also examples of seedless fruits. These are propagated from suckers or cuttings.

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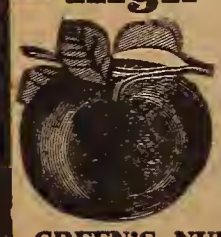

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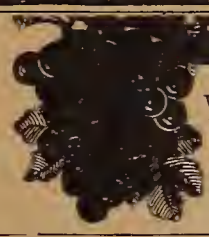

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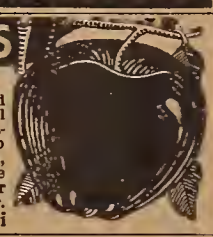

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Poultry Raising

THE BEST BREED OF POULTRY

So much is said of the different breeds that one not up in poultrydom is at a loss as to what breed to raise. Of course, each fancier thinks his breed is the best. And why not? It would indeed be a poor poultryman who did not have enthusiasm for his particular choice. In starting with poultry one should consider the uses for which he wishes them, and so far as possible select the breed that pleases his fancy most, as he will be apt to take more interest in and better care of them than if he chose a variety that did not appeal to him.

If one is looking for eggs, he will find the Leghorns and Minorcas best suited to his needs. They make very fine broilers up to one and one half pounds; beyond that weight they are liable to be stringy.

For an all-round fowl the Plymouth Rocks, Wyandottes and Reds are as good as one will find, and if bred with care and the best layers selected for breeding a good laying strain can be built up.

The claim is often made that the fowls of the American class are better winter layers than those of the Mediterranean class; but if those birds that have large combs are kept in suitable houses, free from all drafts and properly ventilated, so as to keep their combs and wattles from freezing, you will find that they will lay as well in winter as at any other time. I recently saw a flock of fowls composed of White Plymouth Rocks and White Leghorns, the owner of which claimed that the Plymouth Rocks laid better in the winter than the Leghorns. Upon inquiry I found that he had hatched them all the early part of March. This accounted for it, as the Leghorn should not be hatched before April or May; for where they are hatched too early, they lay a clutch or two of eggs and then molt and do not commence to lay again until the following spring.

In the selection of stock for a foundation, get the very best you can afford. Better get a trio or pen of first-class birds than a whole lot of common ones. You will never regret it, as you know that like begets like, and if you would raise good birds you must have good breeders. If you wish good utility stock, get them from a dealer who makes a specialty of the utility side of the business. Tell him the kind of birds you want, what you want them for, and state about what you wish to pay for them; he can then answer your letter intelligently and describe the stock he has for sale that will best suit your needs.

C. C. Ackerman.

STRAY POULTRY NOTES

It is not conducive to the greatest success to invest in common stock. The pride one will take in pure-blood stock will ensure better care, and better care will bring added profit.

"I don't get a single egg nowadays. Hens all dried up. I ought to have raised some Plymouth Rocks. Then I would be getting some eggs in cold weather, when they are worth something." That is what one man said to me the other day. No shoe pinches harder than the shoe of neglect of opportunity.

Hens have a little grist mill in their crops. To keep it running they need gravel or shells, or both. They need your help about getting this in winter. Do your part and the chicks will do theirs.

None of us likes to get up in the morning and eat cold victuals. Same way with hens. Give them something warm to start out on.

Very few farms of this country have anything green to feed the hens in winter. That is one reason why they do not get more eggs. Be on the lookout for that this coming year. Lay in a good supply for next winter.

It is a good thing to be ambitious in poultry, as in everything else; but ambition ought to go hand in hand with practical common sense. So begin according to your experience, work in gradually, then your ambition will not be so likely to be disappointed.

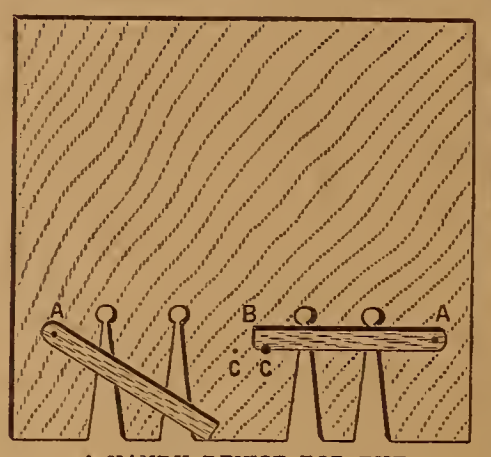
If you put a curtain up at the window at night, don't forget to take it down in the morning, so the sun may shine in.

Don't try to economize when you get a fence for your poultry yard. Have it wide enough so that the hens will not be all the time flying over it. E. L. V.

DEVICE FOR HOLDING POULTRY

It is often difficult for one person to hold a large fowl and doctor it unaided. Having several fowls to treat daily, I set myself to thinking earnestly of some means to make the fowls secure and leave me the free use of both my hands, and this is the result of my cogitations: I took a small board, presumably ten by fourteen inches. In this I bored four holes about four inches from one end of the board, using a half-inch bit in the brace. Then with a rip saw I sawed V-shaped slits into the board, terminating at the holes already bored.

To this, at points marked A A, I nailed small strips of board, using but one nail to each, so that the strips would revolve.



A HANDY DEVICE FOR THE POULTRY YARD

The strips are of such length that when turned inward to B they just meet. At B I constructed a small "button," with which to fasten down the strips when they were put into place.

The completed device I nailed to one edge of a box, the row of holes in the board coming a little above the top of the box.

Taking two fowls at a time, I put one foot into each of the slits in my board, resting the hens on the box, then turn my "clamps" or "levers" over the feet, turn the button over the clamps, and have my birds secure to treat as I will.

Nails slipped through holes bored at C C serve even better than the "button" to secure the clamps.

Anna M. Roberts.

INBREEDING

A lady in Virginia says she has a flock of very beautiful, high-scoring Wyandottes. She last year mated a few of the hens to a very expensive male obtained from a man who breeds several varieties, and the chickens she obtained from this mating were badly marked, and not half so uniform in color as those she obtained from some pullets mated to their sire. She says this has been her experience three different times. Now she wants to know if I think it advisable to sacrifice the beauty and fine qualities of her stock by introducing "new blood." Or would I advise her to inbreed and maintain the high qualities of her flock.

It would appear that she has been testing this matter in a limited and careful manner, and the results have proved unsatisfactory. If she can obtain fowls of better quality by inbreeding, it is advisable to inbreed. If she breeds from only her finest and most vigorous birds there is not the slightest danger of her stock deteriorating. She has built this stock up to a very high standard by careful breeding, and now it would be foolish to destroy all her work by introducing blood that would injure or impair it in any way.

Breeders who are skilled in these matters say that if any defect or weakness exists in the stock, inbreeding will intensify it. That being the case, if there are extraordinary good qualities existing in the stock, would not inbreeding in like manner intensify them? I am inclined to think it would. I would inbreed and retain the good qualities, rather than lose years of careful work. Fred Grundy.

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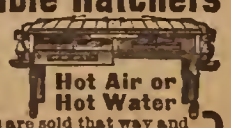
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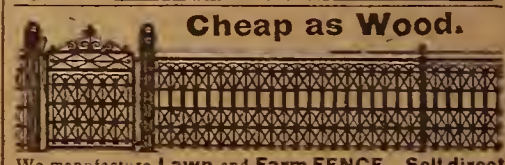
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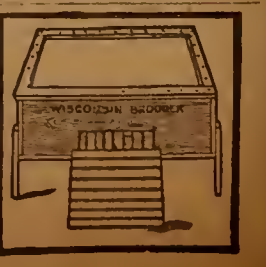


Live Stock and Dairy

A Talk About Swine

A most interesting and instructive talk was that on "Swine Breeding From an Eastern Standpoint," by Calvin J. Huson, of Yates County, New York (before the New York State Breeders). He points out that the pig of the present day is an altogether different animal from what it was only a few years ago, and that it has been brought to a high standard of perfection.

He is not in sympathy with those who regard swine as a sort of necessary evil, and tolerated them only for the sake of making use of by-products and wastes of the farm. Swine on many places for such purposes are often kept in ill-adapted buildings, exposed to cold in winter and heat in summer, in small yards without shade or vegetation, live in filth and squalor, are finally confined in the fall on a diet of corn and water, and butchered when fat and sluggish, with thick and feverish blood. This may be a farmer's way of treating the poor and despised pig, but it is not a breeder's way nor a profitable way.

One advantage which the swine industry has over breeding other stock is found in the almost rabbit-like rapidity of multiplication of the pig. Mr. Huson maintains that the corn belt does not owe its prosperity to an especially favored soil, nor to its tremendous corn crops, but to the fact that this corn crop is marketed in the form of pork as a finished product.

He also asserts that there is scarcely a farmer or fruit grower in this state and elsewhere who cannot add materially to his income by the intelligent production of pork—and this without greatly increasing his labor and expenses. At present the state of New York does not come near producing as much pork as is consumed here. The nearness of the best markets in the world, such as New York City and Buffalo, ensure to the producer in the state somewhat larger net returns than can be expected by the Western producer. Pork and pork products are always readily salable, and prices are very little subject to violent market fluctuations. Pork can be cured and kept, while other meats are largely consumed in the fresh state. Pork is the chief meat diet of the man who works with his hands. All these facts combine to put the swine industry on a firm and safe foundation.

SOME DETAILS IN BREEDING

Close attention to the little matters of detail is, of course, as essential as it is in breeding other live stock of the farm. Few farmers, however, as already stated, give to their swine the same intelligent care and attention that they usually bestow on cattle, horses and sheep.

Breeding sows should be tame and docile. A sow that is kept in fear, timid and sensitive is seldom profitable. Therefore time taken by the owner for daily visits to the pens, to caress the breeding sows, scratch their backs until the animals utter grunts of satisfaction, and learn to look for his visits with pleasure, is time well spent.

To make a pig most profitable the grower must aim to grow it in the quickest possible time, and with least amount of feed. Begin with the pigs when they are two or three weeks old. A little trough is placed in a corner, separated from the pen, so that the dam cannot get to it. Give regular rations of a little sweet and clean milk, no more than the pigs will eat up clean. A little later begin feeding a little wheat middlings, dry, and perhaps a few kernels of cracked corn. Let the pigs begin to eat as soon as possible.

Much trouble can be avoided by providing a slatted partition in the pen, so that when the pigs are ten or twelve days old they can be kept separated from the dam when not nursing. In the morning, after nursing, they are fed their milk or middlings in the trough in their own part of the pen, and the partition is let down, shutting them away from the dam. But as they can run up and down the slatted partition, all the while in sight of the dam, they do not worry, but get exercise enough to keep them in health. At noon the partition is slightly raised, admitting the pigs to the dam to nurse. After that they come back again to their corner to be fed, and the partition is again lowered. The same routine is gone through with at night. Pigs thus handled will do much better than when they are allowed to be with the sow all the time.

If there is a poor specimen among the litter that refuses to grow, it should be examined. Most likely it has a sore tongue, and this, in many cases protrudes from one side of the mouth. Some of the teeth, most likely, will be found sharp pointed, almost like a needle, lacerating the tongue. With a pair of pincers or forceps break off the sharp points, and if the break is left rough, file it smooth.

The pigs are weaned when from seven to ten weeks old. Leave them in their old place. If taken away to a new place, this change and the loss of the dam will worry them greatly. It is much easier and better to take the dam away, out of sight and hearing. The pigs, being well fed and accustomed to being kept separated from the dam, will not miss her much. This one item may make twenty-five pounds difference in the weight of a pig at six months of age.

In these times of high prices of all grains we must try to make most of the growth on cheaper foods, especially good pasture. First in spring comes rye pasture, then clover and other grasses, then rape, and perhaps rye again, oats and peas, alfalfa, rape again, etc. Alfalfa especially makes small grain bills. There is no crop that can give results equal to alfalfa. One way of feeding it or other clovers is by cutting it up fine, putting it in a barrel, steaming it, and mixing a little grain with it. Sorghum makes another valuable and cheap food for hogs. In the bean-growing districts of the state refuse beans are often available for stock food. Pigs do not take kindly to raw beans, and they get sick of cooked beans when given in considerable quantities. But if the beans are steamed or cooked with a few carrots, or beets, or cabbage, or especially onions, or mixed with a little molasses, pigs will eat them greedily. Molasses is a good food with anything, and quite economical. A ration of six pounds of corn, two pounds of molasses and one pound of oil meal is excellent. The crude molasses is dark and thick, and costs about twelve and one half cents a gallon by the barrel. When pigs cannot get to the soil they should have all the charcoal or wood ashes they may want. There is good profit in hogs!

T. Greiner.

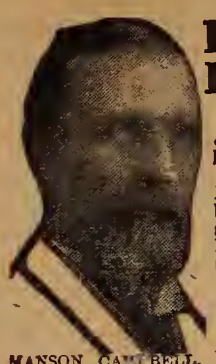
CARE OF THE DRIVING HORSE

Perhaps no horses, on a general average, get more careless treatment than the driving horses. After they have been in service but a few years the majority of them show marked signs of breaking down. Their legs are bent, their backs humped and their heads hang down when they are not in use. This rapid breaking down is mostly due to careless usage and driving; and this being the case, one is led to the belief that the majority of the people have not yet learned the simple art of driving.

Driving horses are usually kept in the barn ready for use. When they are taken out for use they are led but a short distance to the vehicle, and after being hitched up are started off on a brisk trot. "Oh, they can stand it! That's all they do!" I heard one fellow remark, as he "laid" the whip to his horses. "I don't use them for anything else." And right there is the point. They are used for nothing else. These horses are driven on a trot until they reach town. Then they are tied to a post and left to stand until the man gets ready to go home, when they are again driven home and there stabled until the next drive. Nothing breaks a horse down quicker than this standing tied when not in use, and kept on a steady trot when in use. The change is too great and too sudden. Their muscles become stiff from standing, and then again they are too severely taxed by being started too suddenly and kept at a steady trot.

The careful driver, after hitching up his horses, starts them off on a walk and holds them down to this gait for at least half a mile. This gets their muscles gradually used to the exercise. He then starts them up and drives faster for a short distance, and then again pulls them down to a walk. He then gradually increases the speed until the gait at which he wishes to travel is reached. A short distance from his stopping place he again slackens pace, so that the horses will get time to quiet down before they are stopped. By driving in this way the horses will make better time and it will not be nearly so hard on them.

It is wrong to keep the driving horses tied in the barn, thinking that they get plenty of exercise by driving. Such exercise in most cases is too severe and should be classed as work. Gregor H. Glitzke.



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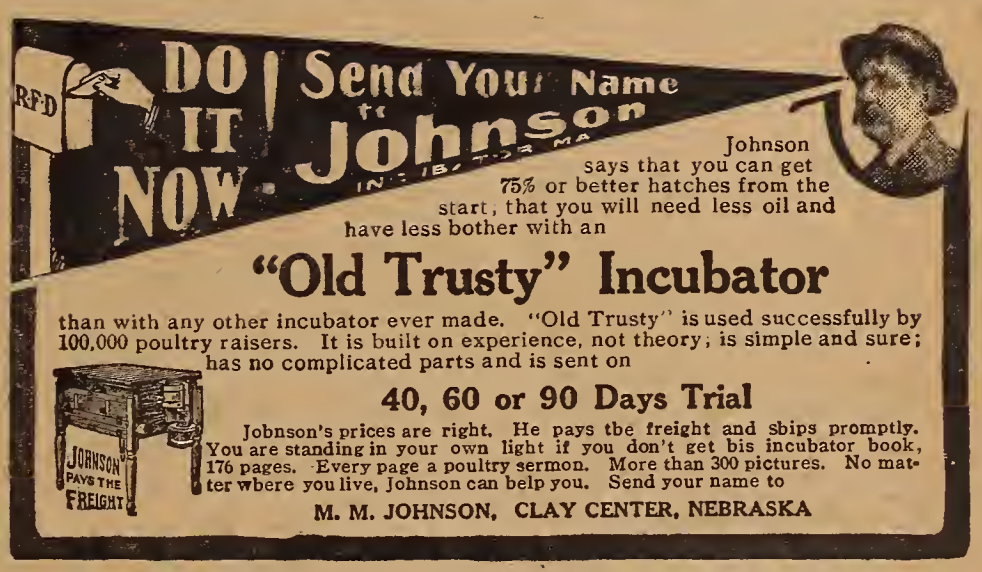

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Methods and Machinery Used in a Modern Cheese Factory

THE cheese-producing sections of the country have for many years been confined to the rough, rolling lands, which afford a wider and less luxuriant range for the cattle than the low and more level lands. The natural result of this fact has been that the breeds of dairy cattle that were grown and developed under similar conditions and environment have proved better adapted to the needs of the man who makes the production of cheese his leading branch of dairying.

To produce good cheese requires good cows, the same as it does to produce good butter or any dairy product of excellence, and while all dairy breeds possess some excellent individuals, in my opinion the Ayrshire, Devon and Brown Swiss cattle are more adapted to the production of cheese and will produce larger and more certain profits than any of the other breeds of dairy cattle, for the reason that they are accustomed to travel long distances for their food, and also on account of their being able to come out in better condition in the spring without being fed expensive mill feed and grain during the winter months.

As a rule cheese making is followed by men who practise summer dairying and allow their cows to go dry three months during the winter and plan to have them freshen early in the spring. With a cheese-producing dairy it is desirable to have the cows all freshen early in the spring, so that they will be in good condition to go out to pasture and give the most milk possible during what we call flush feed, which comes about the middle of May and usually lasts until the middle of July.

The production of cheese is a branch of dairying that is more adapted to the co-operative system of dairying than it is to individual effort, and will be found more profitable when three or four large dairymen combine together and hire a good cheese maker to look after the manufacturing of all their milk into cheese, thus allowing them to find a more ready market and to produce a uniform quality for their trade.

Cheese making is not as easy to learn as butter making. The cheese maker must have a full understanding of the conditions of the milk, as well as of the ingredients which he is using in the manufacture of the product. In other words, he should have a full understanding not only of milk in general, but of the identical batch which he is making into cheese. The presence of any foreign substance or influence may vary the results, if not ruin the product.

In producing good cheese, the same as in producing good dairy products of any other kind, the care of the milk and the utensils used in handling is very important, and the milk should be aerated or cooled as fast as it is drawn from the cows, in order that it be deprived of all animal heat and to prevent any cream from rising upon the surface, as that prevents the dissipation of the heat, which favors decomposition, and thus injures the cheese. Many cheese makers claim that floating curd is due to early decomposition of the milk.

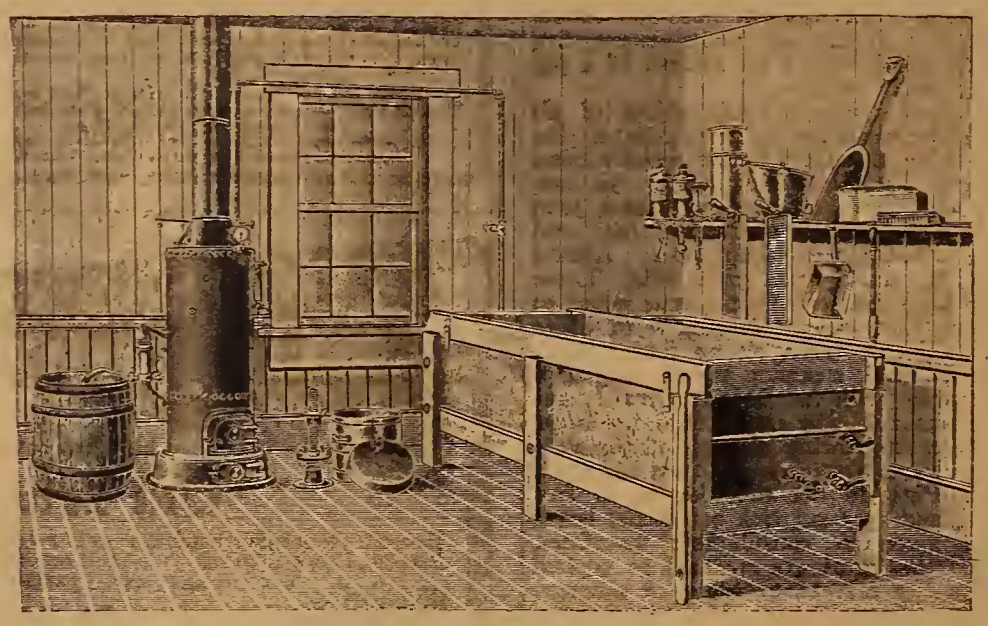
Some farmers deliver their milk to the cheese maker the evening it is milked, immediately after it is cooled, and others keep it at home until morning and deliver it with the morning milk.

The milk is weighed and credited to the man who produces it. The evening milk is put into large vats holding about five or six hundred gallons, each vat holding the same quantity, the number of vats depending on the amount of milk handled. It is stirred and cooled to about seventy-five degrees Fahrenheit, and left until morning, when the morning milk is added to the evening, so that each vat will contain equal quantities of each milking.

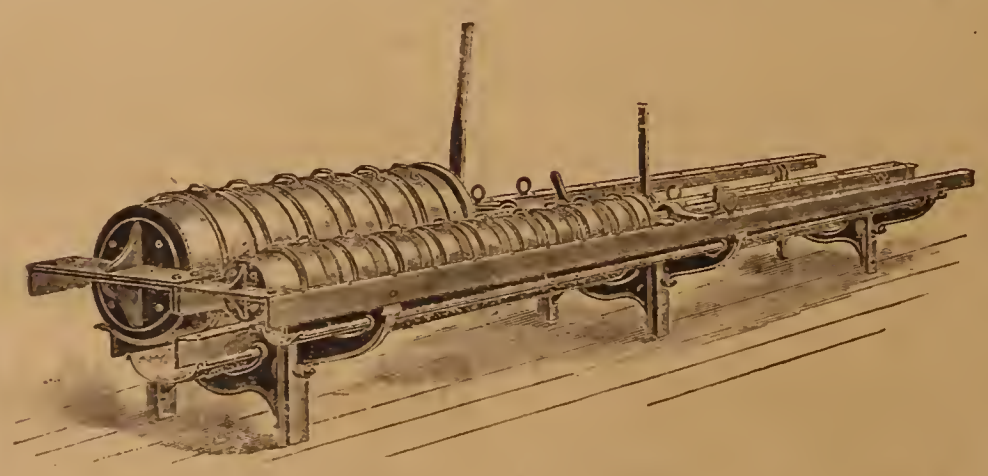
The vat consists of an outside, watertight wooden case set upon legs, and an inside tin vehicle about fourteen inches deep, fourteen feet long and four feet wide, with a space between them, in which run perforated iron pipes. The upper part of the tin vat is turned over the edge of the wooden vat and nailed down, and also is rested on the cleats at the bottom of the wooden vat.

After the milk is mixed in the vats as described, it is stirred thoroughly and heated—in warm weather to about eighty-four degrees and in cold weather to about eighty-six degrees Fahrenheit—and annatto stirred in with a dipper. Rennet is then added in sufficient quantity to form the curd in about eighteen minutes, and much care should be taken to distribute the rennet equally through all of the milk, which is done with a tin dipper.

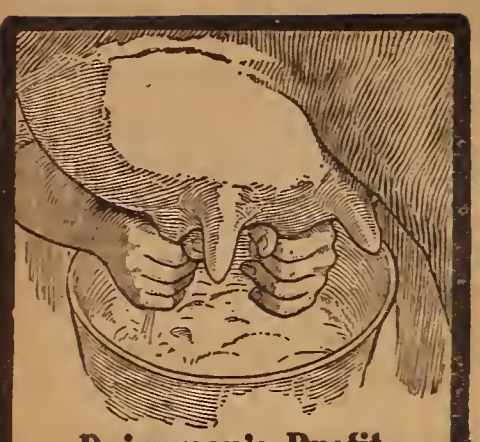
When the curd is formed it is allowed to stand until it becomes in somewhat the same condition as lobbered milk. This must be determined by breaking with the finger, and requires about twenty minutes. It is then cut over with a horizontal curd knife and allowed to stand until the whey begins to come to the top, which usually is in about five minutes. It is then cut lengthwise and then crosswise of the



A CHEESE-MAKING OUTFIT, SUITABLE FOR DAIRY OF FROM SEVENTY-FIVE TO ONE HUNDRED COWS



COMBINATION STEEL GANG PRESS



Dairyman's Profit

Give a cow good food and *power to fully digest it* and she in return will give you ample reward at the pail. Noted authorities tell us that something to correct digestive troubles becomes a necessity if the maximum flow of milk is to be maintained, because overfeeding, sooner or later, impairs the stomach and nerves, preventing necessary secretions of gastric juices.

DR HESS STOCK FOOD A TONIC

puts the cow in condition to pay. It is the prescription of Dr. Hess (M. D., D. V. S.) and besides tonic elements contains iron for the blood and nitrates to cleanse the system. It shortens the time required to fat an animal, gives appetite for roughage, and shows its value by lessening the per cent. of nutriment lost in the droppings.

Sold everywhere on a written guarantee
Costs a penny a day for horse, cow or steer.
100 lbs. $5.00 } Except in Canada and extreme West and South
25 lb. pail $1.60 }
Smaller Quantities at a Slight Advance.

Where Dr. Hess Stock Food differs in particular is in the dose—it's small and fed but twice a day, which proves it has the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal compound and this paper is back of the guarantee.

If your dealer cannot supply you, we will.
DR. HESS & CLARK, Ashland, Ohio
Also manufacturers of Dr. Hess Poultry Pan-a-ce-a and Instant Louse Killer.

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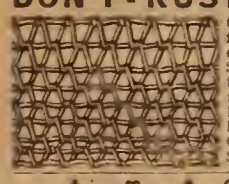

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REX Flintkote ROOFING is used for roofs and sidings on profitable poultry plants, because it keeps the houses warm and dry, with even temperature and humidity.

As a result, fewer chickens are lost and the layers are more productive in poultry houses covered with

REX FLINTKOTE **ROOFING**

This roofing is fire-resisting, rain and snow-proof, and very durable. REX Flintkote ROOFING affords more kinds of protection to your buildings and their contents than any other roofing. Everything needed in laying comes with roll—any laborer can lay it.

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"Making Poultry Pay" is a booklet worth many times the postage (4 cents) which is all we ask for it. Send for it.

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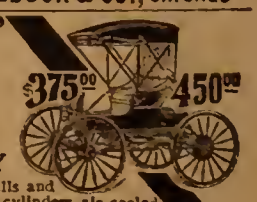

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vat with the curd knife, which leaves it in small cubes with about one-quarter-inch sides; then allowed to stand for about eight or ten minutes and stirred thoroughly but carefully with the hands. The steam is then turned on through the perforated iron pipes, so that the steam comes in direct contact with the tin vat. The curd should be stirred all of the time, to ensure its being evenly cooked. The temperature is brought up to about ninety degrees for this cooking, and is kept there for about thirty-five minutes. When it reaches ninety degrees the steam is turned off and the stirring kept up for about five minutes. It is then left quiet for about five minutes, and the curd settles to the bottom, and one half of the whey is siphoned off; this completes the first heat.

The curd is again broken up with the hands, the steam is turned on and the temperature gradually brought up to about ninety-six degrees in warm weather and ninety-eight degrees in cold. After this temperature is reached the steam is shut off and the curd occasionally stirred with a common wooden hand rake; this is what is called the second heat or cooking. The curd is then left until the desired acid is formed, the amount depending upon the season and the length of time it is desired to keep the cheese. In cold weather and when the cheese is to be sold at once, less acidity is desired; and the reverse in hot weather and when the cheese is to be kept for later sales.

The acidity is generally determined in the following way: A piece of curd is taken in the hand and squeezed as free from the whey as possible. Then a hot piece of steel is pressed gently upon the curd and raised off and the stringiness observed. The more acidity, the longer and finer the strings. Some cheese makers claim they can tell by tasting, but the former process is more accurate.

When the right acid development has taken place, the rest of the whey is siphoned off, and the curd which is left dry is then broken up fine, either with the hands or by running it through a curd mill, and then salted and put in the press. The salt is sprinkled over the curd and well mixed with the hands in the proportion of two and one fourth pounds of salt to one thousand pounds of milk in cool weather, or three pounds of salt to the same amount of milk in warm weather. A gang press is used in most factories, and is made of sheet-iron hoops with one face covered with the same material perforated and the other left open. These are from nine to thirteen inches across the open face and about one inch less at the clothed side or bottom, which makes the hoops cone shaped and allows them to telescope each other. They are from nine to twelve inches high.

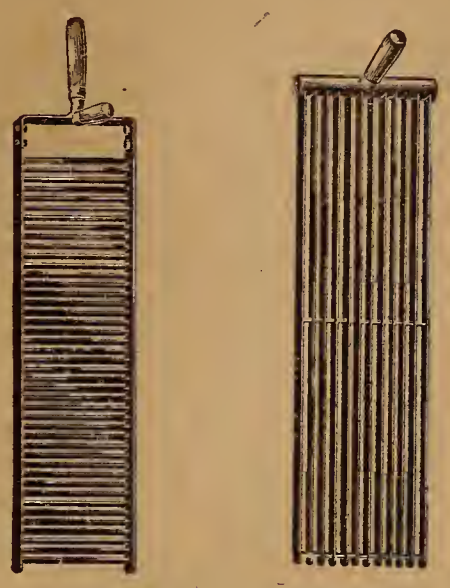
A cloth bandage is placed on the inner circumference of the hoop, and a press cloth, composed of heavy cotton cloth, over the bottom, before the curd is put in; after the curd is put in, another press cloth and a perforated pine board or follower is placed over it, and the hoops containing the curd are placed edgewise in a kind of frame, with a screw at one end and a head block at the other, so that when the press is screwed up the head end of one hoop enters the other.

The cheese is left until the next morning, and kept well screwed up until taken out, when the press cloths are removed and the cheeses are placed flatwise on tables in a dry room, and the upper surface greased with whey butter and left for twenty-four hours, then turned and the other surface treated in the same manner. This treatment is kept up for from fourteen to twenty-one days, when they are ripe and ready for market.

One pound of cheese from ten pounds of milk is considered a good average for a season. The temperature of the curing room should be kept at from seventy to eighty degrees, with plenty of fresh air, but no currents that will come in contact with the cheese. The whey butter or grease is made by boiling the substance that rises on the whey after the curd is removed, and is composed of fat, casein and some of the other component parts of milk.

Annatto coloring is made by mixing seven pounds of the seed with four pounds of crude potash and two pounds of tartrate of soda, and sometimes a little pulverized saltpeter, in a stone jar, pouring on four or five gallons of boiling water while being stirred, and the liquor drawn off and diluted with about eight or ten gallons of water. One teacupful will color ten or twelve hundred pounds of milk.

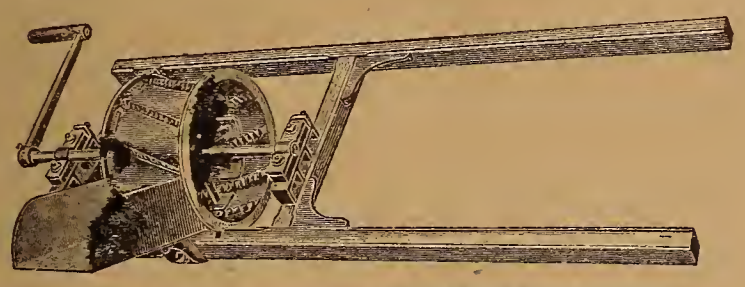
Most of the rennet used is imported, and is the fourth stomach of a calf. This comes packed in salt, and is made ready for use by cutting and placing in warm water or whey in an earthen jar, and left to macerate for five or six days, a little salt being put in each day. The liquid infusion only is used for curdling the milk.



HORIZONTAL AND VERTICAL CURD KNIVES

When it is desired to make a small amount of cheese on the farm the same principles should be adapted and modified to meet the necessary conditions.

W. MILTON KELLY.



A SIMPLE CURD MILL WHICH SLICES THE CURD INTO SMALL PIECES APPROXIMATING CUBES

HAY RACK FOR SHEEP

For some time I have noted the different troubles sheep raisers have been having in making a satisfactory feed rack to feed hay in—one that will keep them from pushing their heads in and rubbing off the wool, as well as getting chaff in their wool.

I have tried a number of different contrivances, but with no marked success until this winter, when I took a section of woven slat corn cribbing. I advise this, as the laths are hard wood. The old woven lath chicken fence is the same thing. Fasten this at the bottom to a solid board or pole; if a board is used, turn up edge ways and staple the bottom wires to the inside edge so that this forms a hinge, then fasten your top up with wire, making the top of the manger thus made any width you desire. The sheep eating between the lath keep the fence pushed up against the hay until all is eaten, then the manger will drop back of its own weight. For cleaning out the rubbish that accumulates in the bottom unfasten your top wires and the fence will fall flat on the ground.

Should the slats be too close together, enough can be cut out to give the required width and still retain enough strength.

W. B. ELLSWORTH.

Just One Fault With the New

DE LAVAL SEPARATORS

At every conference and convention of the De Laval traveling representatives and local agents during December and January there has been just one criticism made in connection with the new 1908 machines and the policy of the Company in respect to them, and that has been that the Company's advertisements, catalogues and circulars DO NOT BEGIN TO CLAIM NEARLY ENOUGH FOR THE NEW MACHINES, and that if their advantages and many features of superiority could only be brought home to every intending buyer of a cream separator there could scarcely be a single buyer who would not prefer a De Laval machine and find it actually cheaper and wiser in every way to purchase one of them in preference to anything else.

The general concensus of opinion at every meeting has been: "CLAIM MORE FOR THE MACHINES and try harder to make intending buyers really appreciate THEIR SUPREMACY IN EVERY WAY in the face of the claims of all kinds made for would-be competing machines, which, if words and means can only be found to accomplish it, must result in the new De Laval machines SIMPLY SWEEPING THE FIELD IN 1908, provided enough of them can be produced to meet the demand."

A new catalogue illustrating the new machines is to be had for the asking.

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IT PAYS TO BORROW MONEY TO BUY A MANURE SPREADER

IF you do not have to borrow, so much the better. But in any event have a spreader of your own this year. The increase in the first crop through the use of your spreader will more than pay the principal and interest. It will cut down the labor of manure spreading. It will make the work agreeable. There will be no waste of manure. You will have a more fertile soil for future crops.

A manure spreader should be considered as a permanent investment, not as a running expense. For the only way you can get all the value out of the farm manure every year is to use a spreader. There is absolutely no comparison between results produced by hand spreading and machine spreading.

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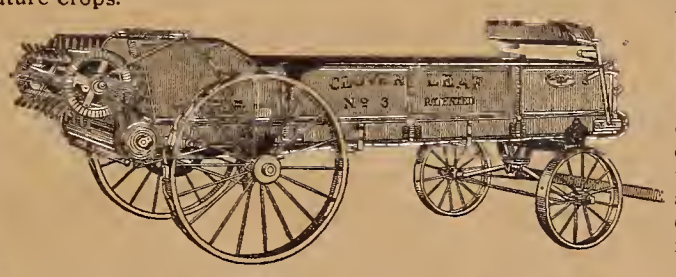
The Kemp 20th Century Return Apron Spreader
The Corn King Return Apron Spreader



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I. H. C. spreaders are not built excessively heavy, but they have all the strength required by such machines. The draft is as light as possible in any spreader.

The machines differ in certain features, but all have good strong broad tired wheels, simple and strong driving parts, are easily and conveniently controlled, and do first-class work with any kind of manure.

Any I. H. C. local agent will supply catalogs and explain the distinguishing features of each machine, or show you a machine at work so that you can choose wisely.

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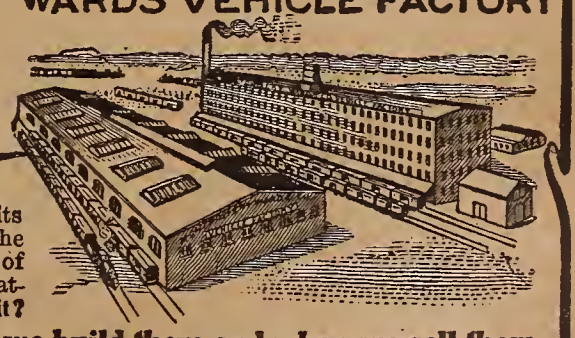

Why pay a third party or even a second, an extra profit for standing between you and the manufacturer? Is it real good business? Do you get anything for the extra cash you are out? **Our Factory, exclusively for users,** is selling its entire output direct, saving its customers from **$20.00 to $40.00** on a purchase. We build work from the ground up. **We know what's under the paint.** You may order any one of our vehicles, examine it inside and out, hitch up and drive with it, if unsatisfactory you need not keep it. **You may be Judge and Jury. Fair, isn't it?**

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PUBLISHED BY

THE CROWELL PUBLISHING COMPANY

SPRINGFIELD, OHIO

Branch Offices: 11 East 24th St., New York City.

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Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

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Be everlastingly in search of the best methods for doing things on the farm.

◈

Let your motto be "More Corn to the Acre," rather than "More Acres of Corn."

◈

Be alive to all the details of your business. Don't produce some crops that eat up all the profits made from others.

◈

Ohio experiments show that the thinner the manure is spread on the ground the greater the good it does—that is, for the same amount of manure.

◈

Many of the hard conditions of life on the farm can be remedied. Do not live beyond your means, but endeavor to make the home life just as bright, attractive and comfortable as possible.

◈

Don't waste effort and labor in trying to produce something in a field which is not adapted to it. Learn to know what crops you can produce to best advantage on your farm or on various parts of it.

◈

Ask one of your United States senators to send you a copy of President Roosevelt's special message to Congress.

The first thing done by the Senate after hearing it read was to order 10,000 extra copies printed.

◈

Address a postal to "United States Department of Agriculture, Washington, D. C.," and ask them to put your name on the mailing list to receive the Farmers' Bulletins. They cover many lines of work in which you are interested.

◈

Almost everything rests with the man. Remember that doing your work well is what makes your occupation honorable. No matter whether you raise corn or wheat, sheep or hogs, to do your work thoroughly should be your ambition.

◈

Counting the yield of timothy hay at one and one half tons to the acre, that of red clover two tons, and that of alfalfa five tons, the protein content of one acre of alfalfa is equal to that of three acres of red clover or nine acres of timothy.

◈

In choosing any line of live stock to raise on your farm you will have a large number of varieties from which to select. Be guided in your choice, first by your personal liking, and then consider well whether the desired breed is suited to your purpose and your conditions.

◈

Now is the time to study the new seed catalogues. They always contain something new, and one or two of these new things tried each year adds interest to the garden. Occasionally some new variety will be found which will prove a valuable addition to your vegetable supply.

◈

If you are interested in the relation that some of our common birds have to agriculture, write to the United States Department of Agriculture, Washington, D. C., for Farmers' Bulletin No. 54, and the United States Department of Agriculture, Biological Survey, for Circular No. 61.

◈

The labor problem is being solved on well-regulated farms by increasing the amount of live stock kept. The animals themselves harvest practically without cost—except for fencing—all the feed consumed during the time when the hand labor is being used in cultivating and harvesting crops.

◈

It takes more than ordinary effort to break away from the old way of just producing crops, without knowing what it is costing or whether any profit is being made. Begin this year by keeping an account of the work done on your corn crop. Get your neighbors to do likewise. In comparing results at the end of the year you may be able to give each other pointers in economy of labor.

◈

During the process of producing each crop the progressive farmer sees points at which he can make the labor a little lighter next year, the cost of production a little less, and the quality of the crop a little better. Successful farming means continued growth in knowledge of methods used and on points of value in each crop.

◈

There is profit in care! All over our land men have found out that it pays to be thorough and careful. They have found that it pays to have their stock just as good as stock of its kind can be. They have found that it pays to have well-kept farms. They have found that more care, more attention to details, more knowledge, must and will result in more profit.

◈

If you have some surplus money on hand just put it into some farm improvement. A tile drain, a new fence or some labor-saving machine will usually bring you larger returns than any railroad stock or gold-mine investment, and then you have the assurance that your money is safe, as well as the pleasure which comes from seeing your farm constantly increasing in value.

◈

No other class in any country produces as much wealth as the farmers of the United States. For every dollar that our miners dig from the gold mines our farmers produce seventy dollars from their farms, and every time that our miners dig a dollar of silver from our mines our farmers produce one hundred and sixty-five dollars from the soil.

◈

A seventy-five-bushel crop of corn removes about twenty-eight dollars' worth of nitrogen, estimated at present prices for commercial fertilizer. Fortunately, nitrogen can be secured from the air by growing legume crops, such as clover, cow peas, soy beans or alfalfa, and the corn crop can get its supply from the decaying legume material.

◈

Extremely long ears of corn always have shallow grains. The same amount of grain is contained in the ear of standard length, the grains being deeper. Likewise, if, from year to year, one selects seed with very deep kernels, he will find his ear growing shorter, and the amount of grain will be lessened. In selecting to produce the maximum amount of grain the circumference of the seed ear should be about seven and one half inches and the length ten inches.

◈

HOPE FOR THE FUTURE

No matter what the reactionaries and the apologists for the muck makers may say, it is evident that the great majority of the American people, irrespective of party, give their hearty approval of President Roosevelt's efforts and determination to have great wrongs remedied. They believe in him and share in his optimism for the future of the country and the ultimate triumph of right over wrong. In the peroration of his extraordinary special message to congress the President says:

"We have just passed through two months of acute financial stress. At any such time it is a sad fact that entirely innocent people suffer from no fault of their own; and every one must feel the keenest sympathy for the large body of honest business men, of honest investors, of honest wage workers, who suffer because involved in a crash for which they are in no way responsible. At such a time there is a natural tendency on the part of many men to feel gloomy and frightened at the outlook, but there is no justification for this feeling. There is no nation so absolutely sure of ultimate success as ours. Of course we shall succeed. Ours is a nation of masterful energy, with a continent for its domain, and it feels within its veins the thrill which comes to those who know that they possess the future. We are not cast down by the fear of failure. We are upheld by the confident hope of ultimate triumph. The wrongs that exist are to be corrected, but they in no way justify doubt as to the final outcome, doubt as to the great material prosperity of the future, or of the lofty spiritual life which is to be built upon that prosperity as a foundation. No misdeeds that are done in the present must be permitted to shroud from our eyes the glorious future of the nation, but because of this very fact it behooves us never to swerve from our resolute purpose to cut out wrong doing and uphold what is right.

* * *

"I do not for a moment believe that the actions of this administration have brought on business distress; so far as this is due to local and not world-wide causes, and to the actions of any particular individuals, it is due to the speculative folly and flagrant dishonesty of a few men of great wealth, who seek to shield themselves from the effects of their own wrong doing by ascribing its results to the actions of those who have sought to put a stop to the wrong doing. But if it were true that to cut out rottenness from the body politic meant a momentary check to an unhealthy seeming prosperity, I should not for one moment hesitate to put the knife to the corruption. On behalf of all our people, on behalf no less of the honest man of means than of the honest man who earns each day's livelihood by that day's sweat of his brow, it is necessary to insist upon honesty in business and politics alike, in all walks of life, in big things and in little things; upon just and fair dealing as between man and man."

◈

RACE-TRACK GAMBLING

In a strong speech before the Citizens' Anti-Race-Track Gambling Society of New York, Governor Hughes said:

"What we want to encourage in this country is the disposition to work, to give an equivalent and to expect and get an equivalent for every honest effort; and the curse is the constant desire to get something for nothing, and with man or boy, if that microbe gets into the system, there is going to be a bad case of moral disorder.

"Now, it is American to want to work, to make the most of yourself, and a boy who learns to follow the racing sheets and the man who plays the races, in the hope that he will get a dollar which he has not earned or ten dollars which he has no right to take, that young man has lost the American sentiment, he has lost really what is the most important part of his birthright.

"Now, my friends, we have heard a great deal about improving the breed of horses. I am for that—the breed of horses and all other live stock. I am thoroughly in favor of doing all we can to improve the breed of men. I do not believe that the breed of horses will suffer from the other policy. I do not believe any reasonable amount of enjoyment will be lost. I have heard it said by those who ought to know that racing will not be seriously jeopardized. I am not against racing. I am against race-track gambling. If the one depends upon the other, I am sorry for that. I regret that, but that is no reason why we should have our Constitution unrecognized and this wide-spread demoralization which could be so easily prevented."

We commend these words to county fair boards throughout the Union, particularly in those states where the laws against gambling are not strict or where there is lax enforcement of the laws. Where race-track gambling is permitted at county fairs we usually find sharpers working all sorts of skin games and swindling devices. Hundreds of county fairs have been ruined by these practises. Race-track gambling has done nothing to improve the breed of horses. Governor Hughes is striving to have it abolished, in order that more can be done to improve the breed of men.

In the Back Office

YOU CAN HELP US decide the increase in subscription price of FARM AND FIRESIDE which we have told you was necessary and which will go into effect March 31st.

As we told you in our issue of January 25th, the more subscribers FARM AND FIRESIDE has, the more we can afford to give you for your subscription price—and the lower we can keep the subscription price.

Here is what you can do if you put your shoulder to the wheel:

We are going to make March 31st

"FARM AND FIRESIDE DAY"

On that day we want you to send us the names of two new subscribers together with fifty cents. We will send each of the new subscribers FARM AND FIRESIDE for a whole year, and to show our appreciation of your kind co-operation, we will extend your own subscription a full year and will send you *The Roosevelt Composite Photograph* besides.

You may get the two subscriptions any time before "FARM AND FIRESIDE Day," March 31st, but if you send them before then, be sure to say they are for "FARM AND FIRESIDE Day."

This is Your Paper

Do you want to see it always better than any farm paper published? Do you want to have it the biggest money's worth? Then help us reach the "Million Mark" by getting two subscribers, and we will do the rest. You will be surprised how easy it is to get the new subscribers. Simply speak to two of your neighbors who do not take the paper, telling them how well you like it, and that you want to get two New Subscribers to help us reach the "Million Mark," and they will gladly give you twenty-five cents each.

Remember the date, March 31st. Don't disappoint us for we are counting on you to help solve this problem of price.

◈

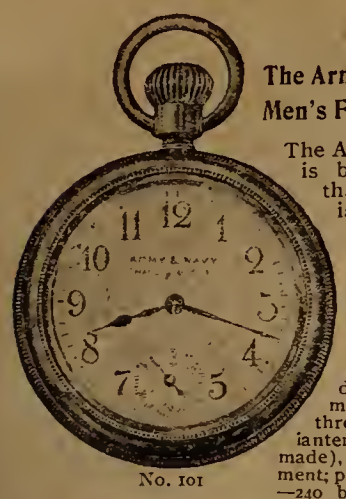
Be sure to see our offers on the four center pages of this number. They are by far the most liberal subscription offers ever made to our readers. Notice the new method of counting, by which one subscription counts as much as four points if for several years. Also notice our *cash prize offers* each month. Every subscription you get for FARM AND FIRESIDE not only counts toward some handsome Merchandise Reward, but also toward a *Cash Prize*. Read over the four pages, and then write for our big Merchandise Payment Catalogue.

◈

There are four clubbing offers we want to call your attention to again. They are FARM AND FIRESIDE *three* years, Vick's Magazine one year and Green's Fruit Grower one year, all for one dollar; FARM AND FIRESIDE *two* years, Farm News one year and Holden's "A. B. C. of Farming," all for only fifty cents; FARM AND FIRESIDE *two* years, Successful Farming one year and Holden's "Successful Corn Culture," all for only fifty cents; and FARM AND FIRESIDE *three* years, and The National Grange, the new official grange paper, all for only one dollar.

MERCHANDISE PAYMENTS OF VALUE

JEWELRY, SILVERWARE AND PRECIOUS STONES



No. 101

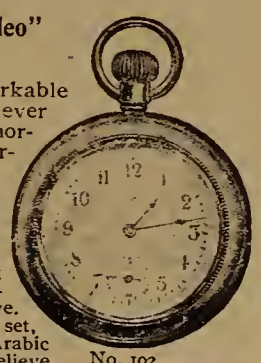
The Army and Navy Boy's and Men's Fine Watch—No. 101

The Army and Navy Watch is brand new—something that we had made especially for the friends of FARM AND FIRESIDE. It is the latest and best low-price watch on the market.

DESCRIPTION: Plain center band; snap back; Arabic or Roman dial; stem wind, stem set; medium size; oxidized movement plate; open face; only three eighths of an inch thick; lantern pinions (smallest ever made), American Lever escapement; polished spring; quick train —240 beats per minute; short wind; runs 32 to 36 hours in one winding; heavy bevel crystal; bevel snaps; tested, regulated and timed; a full year's guarantee by both FARM AND FIRESIDE and the manufacturers, that if, without misuse, the watch fails to keep good time within one year, they will, upon its return to them, with five cents postage, repair it free of charge and return it, is furnished with each and every watch.

This handsome watch in either nickel plate, gold plate, or gun metal case, sent prepaid for only **8 points** to FARM AND FIRESIDE.

Girls' and Ladies' Small "Cleo" Watch—No. 102



No. 102

This is one of the most remarkable values in watches we have ever known. It is in every way a thoroughly reliable watch, and guaranteed by both the manufacturers and FARM AND FIRESIDE for one year.

DESCRIPTION: This watch is made in exactly the same way as the Men's Watch above except that the parts are smaller, and consequently considerably more expensive. The watch is stem wind and stem set, and can be furnished with either Arabic or Roman dial, as preferred. We believe it fully as good a watch as many selling for several times what the "Cleo" costs. We buy this as we buy all of our other merchandise articles, in large quantities, and at the lowest wholesale rates, so that we can offer them to our readers for the smallest possible number of points. This Ladies' "Cleo" watch can be furnished only in the nickel finish. Please notice that both watches have second hands.

This "Cleo" watch will be sent prepaid for only **19 points to** FARM AND FIRESIDE.

Genuine Diamond Solid Gold Ring—No. 111

No. 111

This illustration shows the handsome new diamond ring that we have selected to give our friends this year. The setting of this ring is not an imitation or so-called chip diamond, but is a genuine finely cut diamond. It is a perfect stone in every way. The ring is guaranteed solid gold. The design is new and one of the most beautiful ever offered. The ring comes in a handsome plush box lined with satin. We include this handsome box without additional charge. The ring can be furnished in any size desired. To find the size wanted, use the measure given on the opposite side of this page. Be sure to tell what size you want. We are confident that this beautiful solid gold diamond ring would greatly please every woman or girl in the FARM AND FIRESIDE family.

It will be sent prepaid absolutely without cost for only **50 points to** FARM AND FIRESIDE.

No. 117

Rolled Gold Bracelet—No. 117

This bracelet is one of the handsomest we have ever seen. It is made by one of the largest manufacturing and importing jewelry houses in the country, and while not strictly solid gold, it is so well made that it looks just like solid gold, and will wear for many years—just as well as the most expensive solid gold bracelets. We know there are a great many women and girls in the FARM AND FIRESIDE family who would prize this handsome bracelet most highly, for it could not help but please them.

Sent postpaid entirely without cost for only **20 points to** FARM AND FIRESIDE.

Sterling Silver Toilet and Household Articles

Nos. 105 to 110

Every one of these excellent articles has a solid sterling silver handle. The other parts are made of the best steel, ebony and bristles. Usually such articles as these cost from $1.00 to $2.00 in the high class retail stores, but we offer them here for so few subscriptions, that every FARM AND FIRESIDE family can possess a set of these useful and beautiful dressing table requisites, with almost no work at all.

Any one of these articles will be sent postpaid for only **5 points to** FARM AND FIRESIDE; or all 6 will be sent postpaid for **only 20 points.** This is one of our very best offers.

No. 105 No. 106 No. 107 No. 108 No. 109 No. 110

To Our Readers

Each year it has been the custom to make our readers liberal subscription offers in mid-winter. This year we have used extraordinary care in selecting the rewards we are going to give our readers and friends for getting new subscribers to FARM AND FIRESIDE, and on this page and the three pages following, we present the most attractive offers FARM AND FIRESIDE has ever made.

Every Article Guaranteed

Every article on these pages, and every article that FARM AND FIRESIDE offers, is guaranteed just as represented, and thoroughly reliable. We buy these articles of merchandise in immense quantities at the manufacturers lowest prices, and in offering them to our readers, we give you the benefit of our exceedingly low rate. No where else can you obtain such handsome rewards for so little effort.

We Want You To Help

We hope that every one of our big family of readers will look over these pages carefully, and read every word on them. It will pay you well to do it. We want you to help us reach the "million mark," and we are willing to reward you more liberally than ever for doing so. **If every one of our readers would renew his or her own subscription and get one or more new subscribers before the prices change, we would have a million subscribers by spring.** Won't you do your part? We will help you, and we are counting on **you** to help us.

MERCHANDISE PAYMENT DEPARTMENT
FARM AND FIRESIDE SPRINGFIELD, OHIO

Be sure to read the next three pages.

Ten Year Guaranteed Gold Filled Watches—No. 103 and No. 104

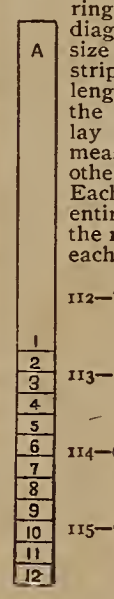
No. 103

Genuine ten year guaranteed gold watches with good standard American movements, usually cost from $10 to $15. This keeps a good many people from having them. No member of the FARM AND FIRESIDE family need go without however, no matter whether it is a man or woman, for we offer here two of the best ten year guaranteed gold filled watches we know of. The Men's watch is regular 16 size, moderately thin model with second hands, and the Woman's watch is a dainty small one, just the right size. Both of these watches have Standard American movements and are guaranteed to keep good time. If we did not know that these are thoroughly reliable watches in every way, we would never offer them to our readers. We are confident that they will give the best of satisfaction. Either of these handsome ten year guaranteed gold filled watches will be sent prepaid, absolutely without cost, for **only 70 points to** FARM AND FIRESIDE.

No. 104

Solid Gold Rings With Genuine Precious Stones—Nos. 112 to 115

These are unusually attractive rings, and make a most pleasing and liberal reward for any one. Every ring is warranted. In every case where we say the stones are real, we guarantee them to be absolutely genuine. Each ring comes in several sizes. The diagram here will show you what size to order. Take a narrow strip of paper and cut it of such a length that it just meets around the finger you want fit. Then lay this strip of paper on the measure with one end at A; the other end shows the size to order. Each ring is sent by mail postpaid entirely without cost. Below are the number of points required for each ring.



112—Two Polished, Real Opals, given for only **18 points to** FARM AND FIRESIDE.

113—Polished Real Garnet, given for only **18 points to** FARM AND FIRESIDE.

114—6 Pearls, 3 Rubies or Emeralds, given for only **15 points to** FARM AND FIRESIDE.

115—One Ruby or Emerald, given for only **16 points to** FARM AND FIRESIDE.

No. 112

No. 113

No. 114

No. 115

Genuine Rolled Gold Cuff Buttons—No. 116

These handsome Cuff Buttons will wear for years and years, and cannot be distinguished from solid gold ones costing many times as much. They are made by one of the highest grade manufacturing jewelry houses in America, and we know they will please any friend of FARM AND FIRESIDE who is fortunate enough to get them. The Cuff Buttons are just as pictured in this illustration.

They will be sent absolutely without cost, prepaid, for only **10 points to** FARM AND FIRESIDE.

No. 116

Excellent Silver Table Ware With Sterling Silver Design

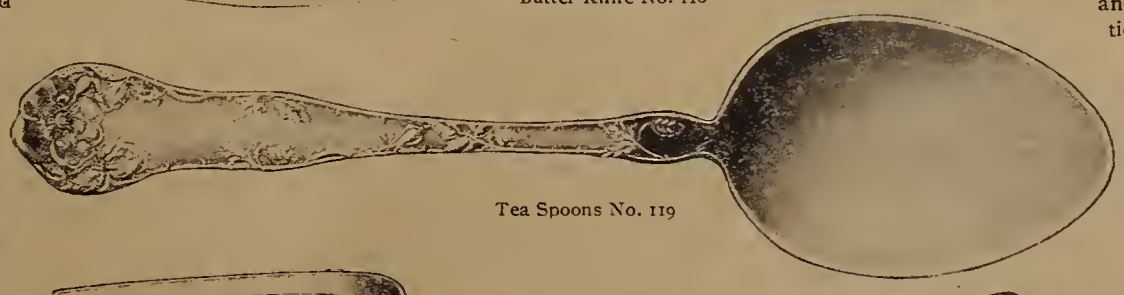
Guaranteed for Ten Years

DESCRIPTION: We believe that there has been nothing created in the line of Silverware heretofore that surpasses this handsome wild rose pattern in real beauty. It requires an expert to tell the difference between these spoons and the regular sterling ware that costs $7.50 for a set of six spoons.

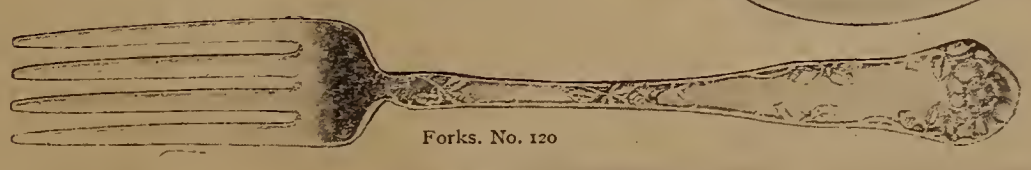
This ware is absolutely guaranteed by the manufacturers to wear and give perfect satisfaction under ordinary circumstances, for a period of ten years, and any defect in that time will be made good by the manufacturers. This design has met with the most enthusiastic praise from expert judges, being pronounced equal to the best sterling in artistic design, and the working out of a unitary conception. In it, you have a representation of the growing wild rose, carried out to the minutest detail, with back design to match the face, and the whole effect is that of the very best sterling silver.

FARM AND FIRESIDE thoroughly guarantees and recommends to its readers this handsome silverware. We are confident that it will please them in every way, and give the utmost satisfaction.

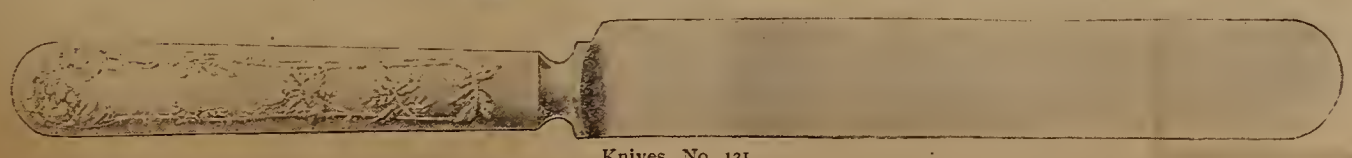
Butter Knife No. 118



Tea Spoons No. 119



Forks. No. 120



Knives, No. 121

For several years now we have offered this Wild Rose design with the pretty French gray finish to our readers, and it has been very satisfactory. It wears much better than most silver plate, and also looks much handsomer than the inferior designs.

This handsome silverware is sent prepaid, absolutely without cost as follows:

118—6 Butter Knives, for only **14 points to** FARM AND FIRESIDE.

119—6 Tea Spoons, for only **8 points to** FARM AND FIRESIDE.

120—6 Forks, for only **15 points to** FARM AND FIRESIDE.

121—6 Knives, for only **22 points to** FARM AND FIRESIDE.

LIBERAL REWARDS FOR YOUR EVERY EFFORT

USEFUL AND PRACTICAL ARTICLES FOR ALL

New Improved Magic Lantern—No. 201

This magic lantern is one of the very latest square shapes. It is made of Russia tin with a nickel trimmed smoke stack; perforated fire box; nickel extension: telescope lens with two glasses and ball optic, producing extra size and most distinct pictures; brass burner lamp, complete with wick. Body 5½ by 4½ inches. Total height 10¼ inches. With this lantern go six interesting one-inch slides. We believe this Magic Lantern is one of the best ever offered. It will please the whole family, and we are sure lots of our boys and girls can make a great deal of money giving magic lantern exhibitions with this fine instrument.

The whole outfit, lantern and slides, is securely packed in a box, and will be sent prepaid to any one for only **10 points to** FARM AND FIRESIDE. These lanterns are made by a company that sells more magic lanterns than any other concern in America.

No. 201

Sterling Silver Thimble—No. 205

This is a more attractive and prettier thimble than any we have offered before. It is made of solid sterling silver, and is carefully finished. It can be furnished in any size. In ordering, state which size you want.

We believe in this thimble we have gotten the best value to be obtained for the money, and we will send it entirely without cost and prepaid for only **5 points to** FARM AND FIRESIDE.

No. 205

The Rollman Food Chopper—No. 1450

This is one of the most useful machines that any household can have. It is easy to turn and easy to open and clean (see picture). Feeds all the food through the cutters. There is no waste. Light in weight, convenient in size. A little Giant of Efficiency and a regular miracle in iron and steel. These food cutters have practically only two parts, and a child can operate them.

The Rollman Food Chopper will chop one pound of raw or cooked meat per minute. It also chops fish, vegetables, fruits, nuts, spices, coffee, coconuts, horse radish, codfish, etc. Has steel cutters—coarse, medium and fine, and nut butter cutters. All four of these cutters go with the machine. One of these excellent food cutters will be sent prepaid for only **14 points to** FARM AND FIRESIDE.

No. 1450

The Handy Tool Holder and Tools No. 207

This is one of the handiest and most useful articles ever invented. Contains 10 tools all within the handle as follows:

Tack Bar, Two Chisels, Screw Driver, Five Assorted Awls, One Gimlet.

Every one good quality tempered steel. The handle is of highly polished Cocobolo, with nickel-plated thumb-grip end. The jaws will not only hold all the tools contained in the hollow handle, but all other things from a needle up to a nail file. Every tool is honed to a fine cutting edge. The whole outfit is made for service, and will give the greatest satisfaction. Length of the handle alone, 6¼ inches, and the end screws on or off, so that the tools may be taken out or put in whenever desired.

This useful tool holder complete with tools sent prepaid for only **6 points to** FARM AND FIRESIDE.

No. 207

No. 1864

New Wide Runner Skates—Nos. 202-203

These are the very latest ideas in the line of skates, because they can be used either on ice or snow equally well. Wide Runner Skates are not only attractive on account of their novelty and usefulness, but boys and girls like to own something that their companions do not possess. With these skates you do not have to wait for thick ice, but can skate on a light snow or sometimes even on a heavy frost.

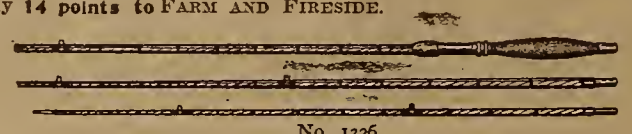
These skates are made of especially high quality steel, extra strong to resist hard usage and are handsomely finished. They are furnished in sizes 7, 8, 9, 10 or 11, for either boy or girl. In sending in your order, state just which size you want.

A pair of these handsome and useful skates will be sent for only **9 points to** FARM AND FIRESIDE, receiver to pay express charges. These skates are considerably lighter than the ordinary clumsy, heavy steel skates.

Special Calcutta Bamboo Three-Piece Fishing Rod—No. 1326

Complete with 30-foot heavy line, egg-shaped sinker and Kirby ring hook. This rod has full nickel mountings, ebonized wood grasp, solid reel seat above hand, strong waterproof ferrule seated in cement and firmly pinned, spiral line guides and tip. Length, 8 to 10 feet; weight, 12 to 14 ounces. This is an excellent rod for all kinds of fishing, and it is so well made that it will stand unusually hard usage. We are confident it will give our readers the very best of satisfaction.

The whole outfit complete, rod, line, sinker, hook and all, sent prepaid for only **14 points to** FARM AND FIRESIDE.



No. 1326

Prices to be Changed

As we have already said, the price of FARM AND FIRESIDE will be changed March 31st. First, be sure that your own subscription is renewed for three or seven years at the present low prices. Then get all the **new** subscribers you can among your neighbors and acquaintances, while the low prices last. As a special favor to our readers, we are going to let them take **new** subscriptions at the present low prices, up to April 30th, 1908—a whole month after the prices change to the outsiders.

An Advantage For You

People will be only too glad to subscribe now, when you tell them that it will cost them considerably more later on—and especially when you show them a copy of FARM AND FIRESIDE and tell them they can get it seven years (168 numbers) for only $1.00, at a cost of only 6-10 of a cent a number; three years (72 numbers) for only $.50, at a cost of only 7-10 of a cent a number; or one year (24 numbers) for $.25 at a cost of only a cent a number. You know and we know that at these prices, FARM AND FIRESIDE is the biggest value of any paper or magazine in the country.

The Change Will Help

The change in price will help you get subscriptions you might not ordinarily get. Lots of people will subscribe now to save money. Now is the time to "make hay while the sun shines" and get all your friends and neighbors to subscribe. This is your chance to get something for yourself or your home, that you have wanted a long time—and get it without a cent of cost, for just a little of your spare time. You will be liberally rewarded for every subscription you get. Read the next page.

MERCHANDISE PAYMENT DEPARTMENT

FARM AND FIRESIDE SPRINGFIELD, OHIO

A Pair of Nottingham Lace Curtains—No. 1864

With overlock stitched edges. These curtains are white, 40 inches wide, giving actual size when up, 38 inches by 3 yards. They have a shaded floral lattice-effect center, with a six-inch border of flowers and foliage, outside of which is a floral and rococo design. The design is entirely new, and one of the prettiest novelties brought out this season. The lace is of very good quality and we feel that a pair of these beautiful curtains will please the most particular of our readers. This pair of handsome Nottingham Lace Curtains will be sent for only **17 points to** FARM AND FIRESIDE. Transportation charges prepaid.

The Nogi Near-Cut Glass—No. 214

Twenty-seven pieces altogether. This is the best imitation cut glass that we know of. It is so much like the genuine cut glass that only an expert can tell the difference. The pieces are all well proportioned, the lines graceful, and the figure an excellent imitation of the richest cut glass designs. The assortment contains only useful pieces and will certainly appeal to the housewife who needs a glassware service that is neat, useful and at the same time, handsome. Each set is packed in a neat box, and contains the following pieces:

One four-piece Table Set,
Sugar and Cover,
One large Water Jug,
Six 4½-inch Berry Dishes,
Creamer,
Butter and Cover,
One-eight-inch Berry Dish,
One-six-inch Preserve,
Spooner,
Six Tumblers,
One Pickle Dish,
One Oil or Vinegar Cruet,
One High-Foot Jelly Dish,
Two Salt and Pepper Shakers,
One Celery Dish.

Making a total of twenty-seven pieces altogether.

This handsome set will be sent complete and carefully packed for only **25 points to** FARM AND FIRESIDE, freight charges to be paid by receiver.

We believe this one of our very best offers.

The Weno Hawk-Eye Camera—No. 1347

The lens is automatic, remaining always in focus, and is fitted with a set of three stops, making the camera capable of both instantaneous work and a high grade of indoor and portrait work. The shutter, too, can be set in three different speeds, for snap-shot photographs, thus allowing for variations in the sunlight. Another button opens the shutter for a time exposure, and the second pressure on this same button closes the shutter at the end of the exposure. Has square finder with separate lens and socket for tripod screw. Fitted with automatic register, permitting the use of either perforated daylight loading film, or the cartridge films. Films are very inexpensive.

The camera is covered with handsome morocco grain leather, and trimmings are nickel plate. It is very easy to operate, and measures 4¼ by 4½ by 5½ inches. The size of the photo is 3½ inches square. The camera weighs only 20 ounces. The films used in it may be had for two, six or twelve exposures. Sent to you absolutely without cost, and prepaid for only **45 points to** FARM AND FIRESIDE.

No. 1347

Solid Gold Pearl Handle Pen No. 210

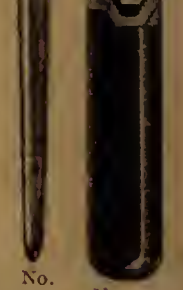
This handsome pen will delight any girl or woman, and is sure to be an article of ornament in any home. The shaft of the pen is one piece of clear polished pearl. It is mounted in gold, artistically engraved, and has a solid gold pen. It is ladies' full size and is a regular beauty. Sent in handsome hinged plush covered box, prepaid for only **11 points to** FARM AND FIRESIDE.

Solid Gold Fountain Pen No. 211

This fountain pen is made by the famous Diamond Point Pen Company, of New York, who make hundreds of thousands of pens every year and guarantee every one of them. Each pen has a solid gold 14-carat pen point, and every pen is thoroughly tested before it leaves the factory, and will last almost a life time with careful use.

Fountain pens are becoming more and more universally used every day. They are almost indispensable for keeping accounts, jotting down notes in your note-book, making memorandums, etc. One of them will make you forever independent of the ink bottle.

This 14-karat solid gold fountain pen will be sent prepaid without cost for only **6 points to** FARM AND FIRESIDE.



No. 210

No. 211

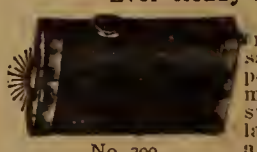
Boys' Repeating Daisy Air Rifle—No. 1279

No. 1279

What boy does not want an air rifle? This is one of the very best to be obtained. It is harmless, strong, durable, shoots accurately and cultivates trueness of sight and eveuness of nerve. Shoots 300 times with one loading. Uses no powder—just air. Shot costs but ten cents for 1,000. Made of strong steel and even grained wood, and will last for years. All parts are interchangeable. Each rifle is pistol grip, true sights, and is so strongly made, that it is almost impossible for it to get out of order.

This excellent repeating air rifle will be sent for only **8 points to** FARM AND FIRESIDE, express charges to be paid by receiver.

Ever Ready Electric Search Light—No. 209



No. 209

These are the most remarkable little electric lights you can imagine. They are so safe, that they can be put in a keg of gunpowder without the slightest danger. Every man has dozens of opportunities for using such a light as this. It will do away to a large extent with carrying a lantern, when a large amount of light is not needed. Always ready for use by simply pressing the button. Adopted by all the large police and detective agencies in the world. Endorsed and used by the United States Army and Navy. Just the thing for any one making night calls, or going into dark granaries, stables, etc. This search light in a strong metal case, with handsome copper oxidized finish, sent prepaid without cost for only **9 points to** FARM AND FIRESIDE.

No. 214

GET WHAT YOU WANT BY USING YOUR SPARE TIME WELL

YOU CAN GET THESE WITHOUT A CENT OF COST

No. 1796

High Grade Violin—No. 1796

This violin is manufactured by one of the finest houses in the country. It is full size, good quality, tint brown color, polished, fine maple back, ebony finished trimmings—a regular winner. We will send with it a first class bow, and a solid wood black varnished case, half lined with flannel, and complete with the hooks, handle, etc. We are confident that this outfit will give good satisfaction for the workmanship and quality of each article are first rate in very respect.

We will send the complete outfit for only **47 points to** FARM AND FIRESIDE, express charges to be paid by receiver. Violin and bow alone sent for only **27 points to** FARM AND FIRESIDE.

Imported Beaded Bag—No. 310

This bag is 4 by 3 inches. It has full length chain handle, 3-inch gilt two-ball frame, one-piece side and bottom, sides extending above frame, two outside pockets, closely woven white and black cloth body, lined, kid gusseted ends, artistic designs in steel and gilt beads. This is one of the handsomest imported beaded bags on the market. We believe it will please our readers immensely.

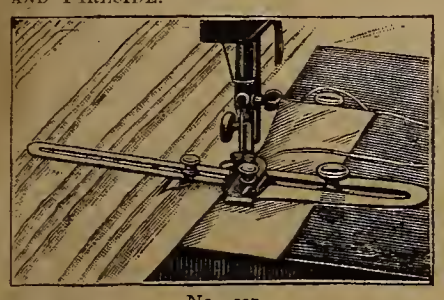
Sent postpaid absolutely without cost for only **8 points to** FARM AND FIRESIDE.

Excellent American Guitar—No. 1795

This guitar is made by the same high grade manufacturer who makes the violin described above. The guitar is of best quality maple, in imitation of rosewood. It is varnished, has orange top, celluloid edge around the front, position dots, metal tail piece, and six steel strings. This guitar is first rate in every respect, and will give the best of satisfaction.

With it, we will send absolutely without cost, a handsome canvass guitar case, genuine leather binding, fleece lined, end opening, best quality, superior model, patent handle. Both guitar and case are full size.

Guitar and case will both be sent for only **47 points to** FARM AND FIRESIDE, express charges to be paid by receiver. Guitar alone sent for only **27 points to** FARM AND FIRESIDE.



No. 307

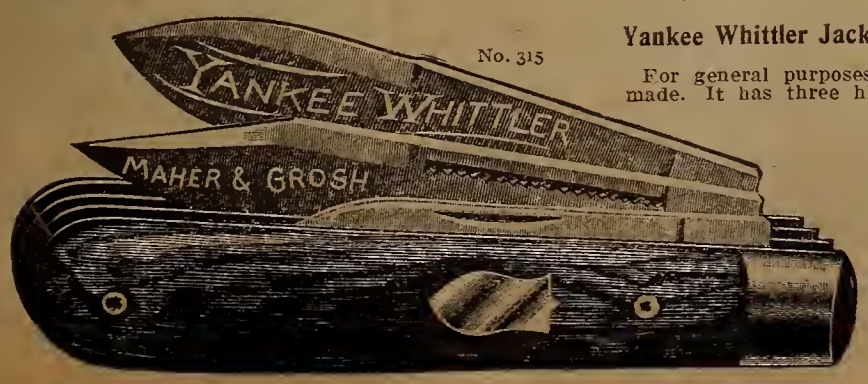
Magic Tucker—No. 307 (regular price $1.00)

This marvelous instrument is one of the most remarkable that has been invented in recent years. It is made of the best quality steel, nickel plated, fits any sewing machine, is easily put on or taken off, cannot get out of order, does not touch the foot or feed of the machine, and does not cut, pull or stretch the goods. Any quality of material is tucked equally well, and it takes the smallest pin tuck to the largest tuck with equal precision. This wonderful device tucks silks, flannels or woolens without creasing, basting or measuring. With one of these tuckers, you can do all sorts of things on your sewing machine that have been impossible before. If you have a sewing machine, you certainly ought to have one of these Magic Tuckers. They are sold all over the country at $1.00, but we will send one postpaid for only **5 points to** FARM AND FIRESIDE.

Silver-Plated Pepper and Salt Shakers—No. 311

This salt and pepper set is the best grade of heavy silver-plated ware. The body of each shaker is finished in the beautiful satin finish, while the top and lower part, up to the embossing, is highly burnished. Each one is 2¾ by 1¼ inches in diameter. Their wearing qualities are of the very best. They are sent to you carefully packed in a box by mail postpaid.

You can have them absolutely without cost for only **2 points to** FARM AND FIRESIDE.

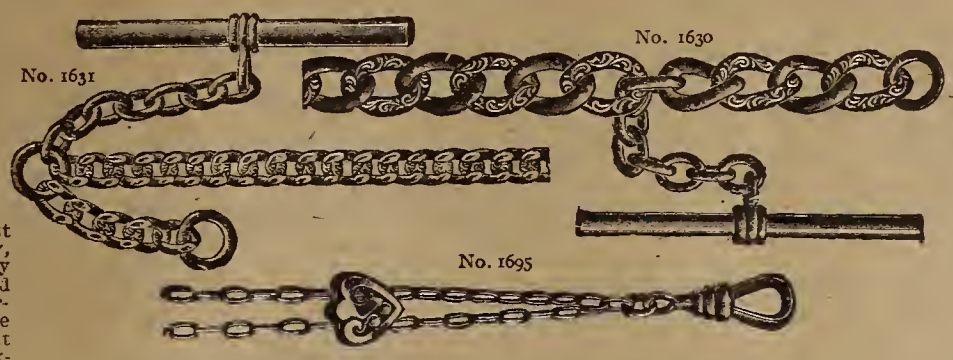


No. 315

Yankee Whittler Jack Knife—No. 315

For general purposes, this is the best jack knife made. It has three blades, hand forged out of the best steel, and carefully tempered as a razor blade. The handles are of solid wood, nicely trimmed. We warrant them to give the very best of satisfaction, and to carry a keen, sharp edge. With ordinary care this knife will last a life time.

One of these Yankee Whittlers will be sent postpaid absolutely without cost, for only **8 points to** FARM AND FIRESIDE.



No. 1630

No. 1631

No. 1695

Men's Handsome Rolled Gold Watch Chains—No. 1630

This handsome chain is what is known as the Open Curve Link. It is eleven inches long, and warranted to wear for years. Has an attachment for a charm and is complete in every way. Sent postpaid absolutely without cost for only **13 points to** FARM AND FIRESIDE.

Chased Wire Link Chain—No. 1631

This chain is handsomely chased and guaranteed to wear for years. Like Chain No. 1630 it is manufactured by one of the most reliable jewelry houses in the country, and guaranteed full gold finish. The chain is eleven inches long and has an attachment for a charm. It is much heavier than Chain No. 1630. It will be sent postpaid without cost for only **16 points to** FARM AND FIRESIDE.

Ladies' Gold Chain, 50 inches long, warranted for ten years—No. 1695

This handsome chain is made of solid rolled gold plate. It is what is known as the open curve style, has polished slide mounted with two pearls. It is a very handsome chain, will wear well, and cannot fail to please the most fastidious. Although we show but a small section, the chain is full length. It will be sent prepaid for only **21 points to** FARM AND FIRESIDE.

Cash Prizes Also

In addition to these liberal and splendid merchandise rewards, we shall give away to our friends who send us subscriptions, cash prizes each month:

$150.00 IN MARCH
$150.00 IN APRIL

The prize money for May and June will be announced later in FARM AND FIRESIDE.

This prize money will be divided as follows:—the person having the most "points" each month winning first prize, the second largest number of "points" second prize, and so on down the list. 1st $25.00, 2nd, $15.00, 3rd, $10.00, 4th and 5th, $5.00 each, 6th to 10th $3.00 each, 11th to 20th $2.00 each, 21st to 40th $1.00 each, 41st to 60th $.50 each, making a grand total of

60 CASH PRIZES EACH MONTH

You can win one easily if you start now.

SPECIAL NOTICE

All subscriptions sent through the Merchandise Payment Department, or to count toward any of these rewards or prize money, are to count as follows: This is very important.

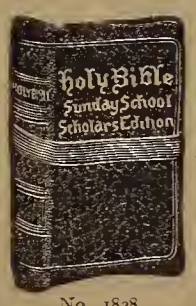
A one-year subscription 25 cts - -	**1 point**
A three-year subscription 50 cts -	**2 points**
A seven-year subscription $1.00 -	**4 points**

A point for every 25 cts. you collect.

This method is far more liberal than the old method, for it makes only one subscription count two or four points if it is for three or seven years. Under this method, the three-year and seven-year subscriptions count up twice and four times as rapidly as they used to—so get all you can for three or seven years. It will help you win your reward and a cash prize too. The above prices will remain good until the prices of FARM AND FIRESIDE are changed. Get all the subscriptions you can during March. We will announce the change in prices later on in FARM AND FIRESIDE.

MERCHANDISE PAYMENT DEPARTMENT
FARM AND FIRESIDE SPRINGFIELD, OHIO

Morocco Grain Flexible Back Bible—No. 1828



No. 1828

This is one of the most remarkable Bible values we have ever known of. It is a regular reference Bible. Minion, 7 by 5 inches. Thirty-two pages of illustrations and twelve colored maps. The back is of flexible morocco grain with divinity circuit, gold title, red end gold edges and round corners. Each one is furnished with a good quality elastic band. This handsome Bible will be sent postpaid for only **22 points to** FARM AND FIRESIDE.

No. 306

Our New Premier Phonograph and Three Columbia Gold-Molded Records—No. 306

The Premier Phonograph is one of the most remarkable talking machines manufactured. It has a powerful motor, guaranteed to run through more than one record, with a heavier spring than any other talking machine. It is also equipped with the new anti-slipping device to prevent the sound box or reproducer from slipping on the record, thereby prolonging the life of the record considerably and improving the tone quality greatly. The base is strengthened and reinforced, to prevent the breaking of the machines in transit. Each machine is equipped with the new Grand Opera Reproducer, invented and patented by the manufacturers of this talking machine. It is twice the size of the ordinary reproducer, hence the volume of sound is double. The reproducer has a conical curved neck, insuring perfect fit, and an indestructible cap or dome. This machine will produce grand opera or any other records, as perfectly as any $25.00 talking machine on the market. Uses both Edison and Columbia records. Three records sent with every machine without extra cost.

One of these new Premier Talking Machines will be sent to any one for only **25 points to** FARM AND FIRESIDE, transportation charges to be paid by receiver.

No. 1025

Ladies' Bag—Black Seal Leather—No. 1025

Fifth Avenue shape; 9¼ by 4¼ inches. Gilt metal two-ball tubular frame, gusseted ends, mercerized lining. Full length chain handle. Gilt frame purse included. This ladies' bag is sure to be most serviceable and useful, and is plenty large enough for all ordinary purposes when shopping.

Sent prepaid for only **10 points to** FARM AND FIRESIDE.

Tapestry Red Table Cloth—No. 308

This large handsome table cloth is 6 by 4 feet. It has a floral center with a ten-inch border in set and floral design. This table cloth is of excellent value, and will wear well.

Sent postpaid for only **15 points to** FARM AND FIRESIDE.

No. 1910

Close Woven Hammock With Pillow and Spreader

This hammock of close-woven body is of the best cotton weave with full fancy colors, spreader and pillows. Size of body 6½ feet long and 3½ feet wide. A hammock that will wear well and give good service. It is made by one of the largest hammock manufacturers in the country.

This hammock will be sent prepaid for only **19 points to** FARM AND FIRESIDE.

One Dozen Pure Linen Doilies

These doilies are guaranteed absolutely pure linen. Each is 9 inches square. A complete dozen of these handsome doilies will be sent postpaid for only **7 points to** FARM AND FIRESIDE.

Handsome Metal Serving Tray—No. 313

This is one of the most practical premiums we know of combining usefulness and attractiveness. This tray is made of solid metal, 13½ by 17 inches in size, and is **lithographed in twelve colors** by a secret process, each color being baked on. It is practically indestructible and will last for years. **Hot water and scouring** will not injure it. Sent postpaid absolutely without cost for only **5 points to** FARM AND FIRESIDE.

PLEASE PRESERVE THESE FOUR PAGES—YOU WILL WANT THEM

LATER ON, IF YOU DON'T, GIVE THEM TO SOME FRIEND

No. 401

Handsome Rope Portiere—No. 401

This beautiful portiere is 60 by 80 inches, of good size chenille cord with contrasting colors, puffs and heavy tassels. The colors are red and green, so they will harmonize with the wall paper and hangings of almost any room. This is really a very beautiful portiere, and will be sent postpaid without cost for only **13 points** to FARM AND FIRESIDE

No. 402

Ever-Ready Safety Razor—No. 402

This is one of the best Safety Razors on the market. Has banded safety frame and silver finish. Two-piece handle, with plated stropper. Twelve wafer blades, electrically hardened and tempered steel, ready for use; can be stropped if necessary when dull. The twelve old blades can be returned direct to manufacturer with twenty-five cents and twelve new blades received in exchange. The whole set complete in leatherette case. With one of these sets there is absolutely no danger of cutting, as with ordinary razor, and the face may be shaved in about one fifth the time that it takes with the old-fashioned razor. The complete set sent postpaid for only **11 points to** FARM AND FIRESIDE.

Wicker Rocking Chair No. 405

The material, finish, strength, comfort and style of this Wicker Rocking Chair are the best the market affords. This chair is perfectly built by skilled workmen, of imported reed and solid white maple. The back is thirty inches high and the seat nineteen inches high. The shipping weight is about fifteen pounds. It would be hard to find a better looking or more comfortable rocking chair than this. Sent for only **30 points to** FARM AND FIRESIDE.

Freight charges to be paid by receiver.

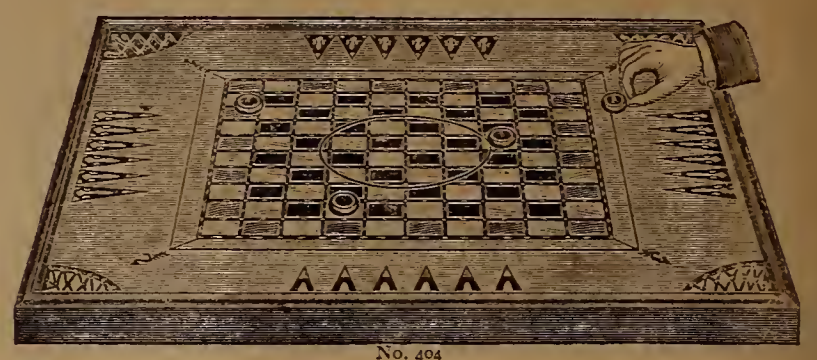
No. 408

All Calf and Leather Wallet—No. 408

This is one of the most durable and convenient wallets made. The pocket and facing are black; very nice and genteel. The wallet has four change or private pockets, three smaller stamp or ticket pockets. A private bill fold closed with special over-flap and top strap. It is very roomy, strictly well made, and is sure to give perfect satisfaction. The size is 2¾ by 4½ inches. This handsome All-Calf Leather Wallet is sent absolutely without cost postpaid for only **7 points to** FARM AND FIRESIDE.

New Game Board for Twenty-nine Games—No. 404

This is one of the most attractive game boards ever invented. It will interest the whole family the year round, because it provides very much enjoyment, and there can be no temptation to seek amusement away from home. Among the games that can be played on it are "Crokinole," Carromola, Checkers, Five Back, Backgammon, Nine Pins, Billiardette, Hawk and Sparrows, Flags of the Nations, and twenty others. The board is twenty-nine inches square, the Carrom side is of polished maple and finished in marquetry imitation in inlaid wood. The Crokinole side has a felt cushion for deadening sound. This handsome game board with twenty-nine games is sent complete for only **25 points to** FARM AND FIRESIDE, express charges to be paid by receiver.



No. 404

A Handsome Family Album

The family album has become a family institution and no home in this broad land is complete without one. Of course you know how much pleasure there is in having a fine collection of photographs of your family and your friends, which can be kept fresh and clean in a handsome album. FARM AND FIRESIDE has a beautiful plush album with gilt clasp and gold edges, containing more pages than you can possibly fill to start with. This album has been one of our favorite gifts for years. You can secure it for only **15 points to** FARM AND FIRESIDE, express charges to be paid by receiver.

The Stevens Little Scout Rifle—No. 406

One of the very best rifles on the market. Will shoot any 22-caliber cartridge. Very simple; all parts attached to action, breech block drops down when cartridge is extracted, positive horizontal extractor, 18-inch barrel, open rear and silver knife edge front sights. Is carefully made of the best quality steel and will shoot very accurately. In fact, the Steven's Rifles are noted for being the most accurate shooting rifles to be obtained. Sent for only **25 points to** FARM AND FIRESIDE, express charges to be paid by receiver.

Instructions and Helps

Agents working for these rewards or for cash prizes, must not offer any premium with FARM AND FIRESIDE unless they charge extra for it. The 500 Roosevelt pictures will be sent with any new or renewal subscription for 5 cents extra.

Both new and renewal and subscriptions, as well as your own subscription, count toward these rewards and cash prizes.

Part cash. If you fail to get enough "points" to win the reward you want, send us 10 cents for every point you are short and we will send you your reward.

Subscriptions credited. If you don't get all the "points" you need to win what you want, we will credit you with as many points as you have, and you can get the rest at your convenience. You always get credit for every subcription.

Express or freight. Articles that have to be sent by express or freight go at receiver's expense, but this is always stated in the description of each article.

How to send money. Amounts under $1.00 can be sent in stamps; over $1.00 send by money order, registered letter, or bills. **Never send coin** unless there is absolutely no other way.

Your Own Subscription Free

When you have gotten ten "points" you will get:

1. Your own subscription or renewal free or extended.
2. Your name enrolled in the FARM AND FIRESIDE "Million Club."
3. A fine "Million Club" Badge.
4. Your name published in FARM AND FIRESIDE on the "Million Club's" "Star List."

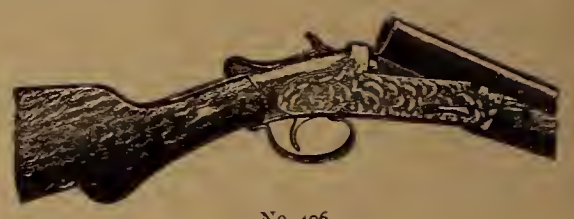
These four things are all **In addition** to the merchandise rewards and the cash prizes.

Catalogue and Outfit Free

If you want our complete Merchandise Payment Catalogue and complete outfit of order blanks, return envelopes, samples, etc., just drop a postal to the address below, and say so. You will get them by return mail.

Address,

MERCHANDISE PAYMENT DEPARTMENT
FARM AND FIRESIDE SPRINGFIELD, OHIO



No. 406

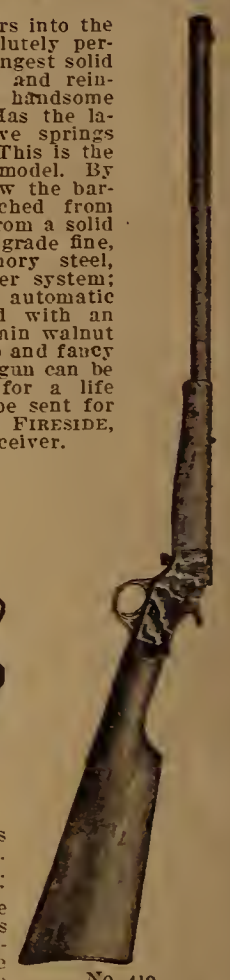
New White Powder Shot Gun—No. 410

Every part and piece that enters into the construction of this gun is absolutely perfect. It has one of the very strongest solid steel frames, made extra heavy and reinforced at all parts. It is given a handsome mottled finish on the outside. Has the latest rebounding hammer, positive springs and the newest top snap break. This is the latest type of the take-down model. By simply removing the thumb screw the barrel and fore end can be detached from the stock. The barrel is bored from a solid bar of the highest grade, extra grade fine, thoroughly tested genuine Armory steel, choke bored by the famous taper system; decarbonized finish, fitted with automatic shell ejector. The gun is fitted with an extra quality finished straight grain walnut stock, with full-capped pistol grip and fancy butt plate. No more serviceable gun can be obtained than this. Will last for a life time. This handsome gun will be sent for only **55 points to** FARM AND FIRESIDE, freight charges to be paid by receiver.

Bissell's Carpet Sweeper No. 409

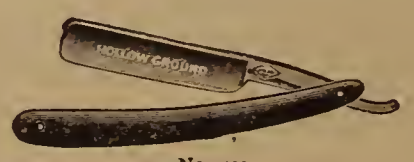
No. 409

Like all Bissell's sweepers, this is a strictly first-class machine. Pans are automatically dumped. The brush is of the best quality bristle with broom action. The machine adjusts itself to all kinds of carpets. The wheels have rubber tires, rubber pads and are perfect in action. This handsome Bissell Sweeper is sent for only **25 points to** FARM AND FIRESIDE, express charges paid by receiver.



No. 410

The Famous Eliot Razor—No. 411



No. 411

This razor is made in Germany, and is one of the very best razors manufactured. The blade is all hand-forged, high quality tempered steel, noted for its cutting edge. Each razor is tested before leaving the factory. We believe these razors will give the best of satisfaction. Sent postpaid absolutely without cost for **7 points to** FARM AND FIRESIDE.

Beautiful 42-Piece Tea Set—No. 414

This beautiful 42-piece tea set is daintily embellished in gold and gold monogram, and will be the pride of any one who secures it. We offer this splendid new complete tea set of 42 pieces for only **75 points to** FARM AND FIRESIDE, freight charges to be paid by receiver.

No. 412

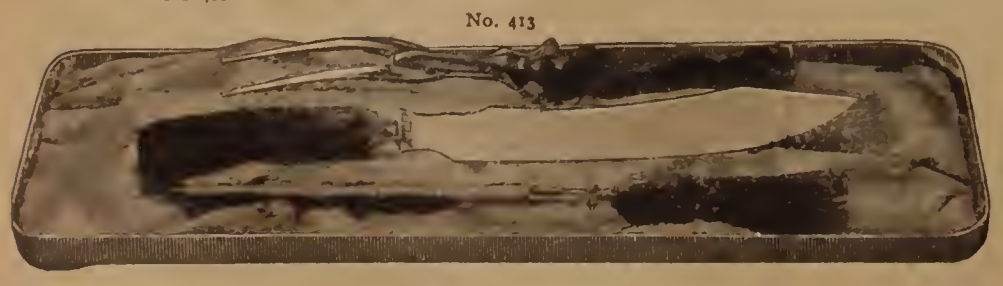
Gold Ormolu Clock No. 412

This is one of the handsomest and showiest clocks made, and will be a splendid ornament to any sitting room or parlor. It has Standard American works, and is guaranteed to keep good time. We know of no other clock that we can recommend to our readers which has a greater value and keeps better time than this. This handsome Ormolu Clock will be sent for only **17 points to** FARM AND FIRESIDE, express charges to be paid by receiver.

Carving Set—No. 413

This Carving Set has genuine stag handles, 9-inch steel Spanish scimiter-swedged blade, hand-forged and etched fork, has a folding rest and guard, fancy German silver ferrules and steel butt caps. The set consists of knife, fork and steel. This complete set will be sent for only **35 points to** FARM AND FIRESIDE, receiver to pay express charges.

No. 413



No. 414

Around the Fireside

Country's Greatest Potato Belt

NEW ENGLAND long ago achieved the distinction of being the champion pie belt of the country, and now it is rather surprising the West by forging ahead of it as a potato belt. The old state of Maine claims the honor of being the great potato belt of the United States, and Aroostook County seems to be the champion county. This county in Maine is said to have produced twenty-five million bushels of potatoes the past year. About two million bushels of this great crop were unmarketable because of the potatoes being rotted or specked with rot, and a good many bushels were too small to send to market. These, however, could be fed to stock. The greater part of this huge crop has been held in storage for the higher prices likely to obtain along toward spring. Upon the prices realized for these potatoes will depend the area to be planted this year, the number of trainloads of phosphates to be ordered for the year's use as fertilizers, the purchase by wives and daughters of Aroostook farmers of plain woolen or silk dresses, the investment in new pianos, the number and size of the new houses and barns to be built, the number of young men and women to enter college, and, above all else, the fate of many young couples who have planned to wed "if the potato crop comes out well." Everything seems to depend largely on the potato crop in Aroostook County, for it is about the only crop grown there, or, rather, on how much the farmers receive for potatoes once they are grown.

There is no marketable commodity that varies so much in valuation as the potato in Aroostook County. In the large cities, where the demand is constant and where the population consumes potatoes regularly without regard to price, the rates charged by the retailers are very rarely less than fifty cents a bushel, and they commonly reach a dollar or more a bushel. In Aroostook, however, if there is no outside call for potatoes, the rate at once drops to the regular price of twenty cents a bushel paid by the starch factories. For the past twelve years, or since the new railroad was opened, the average rate has been one dollar and thirty cents a barrel, the barrel holding two and one half bushels. But sometimes the prices take a rise that delights the hearts of the farmers, and potatoes bring two dollars and even two dollars and a quarter a barrel. Then the Aroostook farmer's wife begins to think that she can have a new silk gown, or the parlor organ can give place to piano, or she and her husband can go to Boston and see the sights.

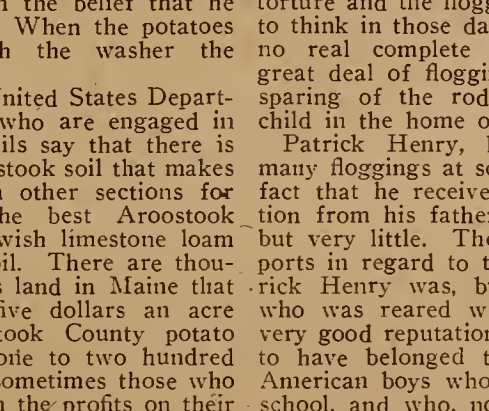
The visitor to Aroostook County when the potato-digging season is at its height will witness scenes of excitement about the buying centers almost equal to the excitement at the stock exchange in New York when a "big movement" of some kind is under way. Some of the buyers have potato warehouses that will hold hundreds of thousands of bushels, and there are stock companies raising potaties in Maine just as there are stock companies running mines out in the great West. Shrewd and unscrupulous manipulators will sometimes connive to knock the bottom out of the potato market just as it is knocked out of other markets. The manner in which the purchasing agents sometimes deceive the farmers is very simple, and the fact that the game is an old one does not keep it from being entirely successful in many places. Late in the afternoon, when a buyer receives an order for a trainload of potatoes, he sends messengers through the country, informing the farmers that he will pay one dollar and twenty-five cents a barrel, for instance, for a trainload of potatoes delivered at a certain siding, first come, first served. The messenger rides here and there with this encouraging news, and the farmers immediately get busy. Some will have their precious potatoes already in barrels and waiting in their cellars. These potatoes are hurried out of the cellar and loaded into carts and wagons, and sometimes the farmers start in the night, that they may be first at the place where the buyer is waiting for them. The procession of teams increases. The excitement begins when the late arrivals come up, only to find that the train has been loaded and is now on its way to the city; and the buyers express regret, but they cannot now pay more than forty cents a barrel for the potatoes. Some of the disgusted farmers sell at this price rather than take the potatoes back home and put them into their cellars. The shrewd buyer is very well aware of the fact that more potatoes will be brought than he can put on his train, and in some instances he is able to buy more at forty or fifty cents a barrel than he buys at the price he has advertised to give. In a few instances the farmers have been so indignant over the trick thus played on them that they have dumped their potatoes into the nearest stream before the eyes of the buyers. But this is about as satisfactory as was the Irishman's ways of getting ahead of the "ould railroad coppyration" by purchasing a round trip ticket from Boston to New York and then boasting that he "didn't intind to come back."

The digging of the great crop of potatoes in Maine is done almost entirely by horse power. Men hired by the day go on ahead of the digger, pulling the potato tops and shaking the tubers from two rows into the gully or trough between. Then the digging machine comes along, shaking and sifting the potatoes from the soil. A man with a good pair of horses can dig from eight to ten acres in a day, or as many as twelve men can pick up and put into bags or barrels. The question of getting the men to do this picking up is often a serious one, for the help problem is as perplexing in Maine as elsewhere. French Canadians are usually hired as potato pickers in Maine, and they receive as much as three dollars a day, with board and lodging. They must of course lose their time on days that are rainy, but they are given their lodging and board just the same.

There are as many as forty starch factories in Aroostook County in Maine, and these require a great many bushels in the course of a year. Hon. Thomas Phair, of Presque Isle, Maine, is one of the largest manufacturers of starch in the world, and one of the novelties in Maine is something called "Tom Phair's Mountain," which is a hill about four hundred feet long by three hundred feet wide and about fifty feet high, composed entirely of small rounded stones, which, in the course of twenty years, Mr. Phair has bought and paid for at the rate of three pounds for a cent, in the belief that he was buying potatoes. When the potatoes were passed through the washer the stones were revealed.

Employees of the United States Department of Agriculture who are engaged in making surveys of soils say that there is no ingredient in Aroostook soil that makes it superior to soil in other sections for raising potatoes. The best Aroostook potato soil is a yellowish limestone loam with a gravelly subsoil. There are thousands of acres of this land in Maine that can be bought for five dollars an acre or less. But Aroostook County potato land sells for from one to two hundred dollars an acre, and sometimes those who buy it pay for it from the profits on their first crop of potatoes.

J. L. HARBOUR.



PATRICK HENRY

Where a Great Oration Was Delivered

NO STATE in the Union has given us more loyal, more spirited, more powerful men than has the fine old state of Virginia, that has just rounded out her three centuries. Of course, the name of George Washington stands at the head of this noble company of Virginians who have added glory and honor to their native state, but "there are others." No list of the illustrious sons of Virginia would be complete without the name of Patrick Henry, and we owe Mr. George Morgan a debt of real gratitude for giving us "The True Patrick Henry," which is a book of biography that all boys should read. It is to be doubted if our boys read enough biography. It is so much better and more inspiring to read about what men have done in real life than it is to read about what they have done in pure fiction. It is worth while to know something about Patrick Henry, one of the greatest orators and patriots of his day, in a time when his native state is being a good deal in the "public eye" because of its three hundredth birthday. Patrick Henry was born at Studley, sixteen miles from Richmond, on the twenty-ninth of May in the year 1736. He was but a few months old when his parents removed to another farm, called Mount Brilliant, twenty-two miles from Richmond. There were three boys in the family at this time, and while the family lived at Mount Brilliant they had seven sisters born into the family. There were no free schools in the country at that time. We are told of the schools of that time: "Anybody could teach. One merely put up his sign, 'John Jones, Teacher,' placed some benches in a room, cut a hickory switch, and all was ready for the torture and the flogging." People seemed to think in those days that there could be no real complete education without a great deal of flogging, and there was no sparing of the rod and spoiling of the child in the home or in the school.

Patrick Henry, however, was spared many floggings at school by reason of the fact that he received most of his education from his father and attended school but very little. There are conflicting reports in regard to the sort of a boy Patrick Henry was, but his brother-in-law, who was reared with him, gives him a very good reputation, although he appears to have belonged to the great army of American boys who do not like to go to school, and who, no doubt, wish in their later life that they had availed themselves of all the educational advantages open to them in their youth. It is pretty certain that there was not much in the boy to indicate that he would one day make a speech that would render his name immortal. Young Patrick Henry had all of a real boy's liking for the woods, for swimming and boating and all the pleasures of outdoor life. We are told of him that "His eyes were sharp; his memory was keen; his whole mind plastic, retentive, receptive."

With seven daughters in the family and the father a poor man it was natural enough that the three boys should be compelled to go to work at an early age, and it must be admitted that Patrick was not very fond of work. At sixteen Patrick Henry was a clerk in a country store, and then his father set Patrick and his brother William up in business in a little store of their own. This little country store was worth more than dollars and cents to Patrick Henry, for it helped him to lay the basis of his wide knowledge of men which never failed him in after life. He studied human nature a good deal in his store. In time Patrick Henry married a young woman named Sarah Shelton, and became a farmer with plenty of hard work before him, but it gave him the outdoor freedom that he loved so well. When his house was burned he again became a storekeeper; then he concluded that he would study law, and spurred on by necessity, he applied himself so well to study that he was admitted to the bar in a surprisingly brief time, and the young lawyer was but twenty-seven years of age when he created a real sensation by his eloquence and unsuspected power in defending a case in court at Williamsburg. He was at this time an awkward, shabby and uncouth-appearing young fellow, whose appearance in the courtroom had excited some ridicule and open amusement. The rustic young lawyer fairly dazed his surprised listeners, and the fire of his own eloquence seemed to urge him on. He spoke for nearly an hour, and so surprising was the effect on his hearers that when the jury returned an immediate verdict in Henry's favor the people lifted him to their shoulders and bore him from the courtroom.

Patrick Henry was thirty-nine years of age when he delivered the speech in Saint John's Church at Richmond, Virginia, that gave him undying fame and that stands on record in our nation's history as one of the greatest speeches ever delivered in our country. This was on the twenty-third of March in the year 1775.

The mutterings of war were so distinct that Patrick Henry declared that war was even then on foot. It was this conviction that caused him to say, in fiery eloquence: "An appeal to arms and the God of hosts is all that is left us!" How many schoolboys have recited Patrick Henry's immortal words from this speech:

"Is life so dear or peace so sweet as to be purchased at the price of chains and slavery? Forbid it, Almighty God! I know not what course others may take, but as for me, give me liberty or give me death!"

Old Saint John's Church, in which this famous speech was delivered, is still standing at the corner of Broad and Twenty-fourth Street in Richmond, and the pew in which Patrick Henry stood when he delivered the speech is still pointed out to hundreds of visitors. The church dates from the year 1740, but it is somewhat larger now than it was originally. One incident connected with this famous oration may not be known to many of our readers. One of the entranced listeners to the overpowering eloquence of Patrick Henry was a Colonel Edward Carrington. He stood on one of the window sills of the church and heard the speech, not being able to secure a seat, and so overwrought was he, that when the speech was ended he jumped down from the window, and cried out, "Let me be buried at this spot!" Thirty-five years later, or in the year 1810, his old comrades of the Revolution cut the green turf beneath the window in which Colonel Carrington had stood, and buried him where he had asked that he might lie when his life was done.

Patrick Henry retired from public life in the year 1794, when he was but fifty-eight years of age. He purchased a beautiful estate called Red Hill, and here he lived until the sixth of June in the year 1799, when he died sitting in his chair, fully conscious of the fact that he had an incurable malady and his last day was at hand. He met death very quietly and calmly, and prayed for himself and his family just before he died. Just before he breathed his last he asked his doctor to note how great a benefit religion was to a man about to die. What countless numbers of men and women have also known in their last moments how great are the benefits of religion to one about to enter the valley and the shadow to return no more.

MAX MERRYMAN.

OLD SAINT JOHN'S CHURCH, RICHMOND, VIRGINIA, WHERE THE FAMOUS SPEECH WAS DELIVERED

The Impostor

By Frank E Channon

Synopsis of Previous Chapters

Amos Jackson, rich American, athlete, and his lawyer and fellow countryman, Donnaly, were returning from the Stanford Bridge Athletic Grounds, England, where the former had won great honors, when they stop a runaway tandem, make some new acquaintances, and receive an invitation to dinner. The hosts prove to be the Queen, and her uncle and aunt, of the island kingdom of Mirtheinm. While on a tour of the Continent the royal party had met with a terrible loss in the sudden death of the King, since which time return to the island had been repeatedly postponed, for it was feared that to return without a king meant the overthrow of the dynasty. Jackson in appearance proves to be a double of the late King, and the proposition is made that the American athlete return with the royal party as ruler of Mirtheium. During the interview a spy of the Cassell party of Mirtheium, is discovered behind the draperies. He is captured, branded as a lunatic, and turned over to a private sanatorium for safekeeping. The royal party augmented by the "Impostor" and his "new American secretary," return to the island and are welcomed with great pomp and ceremony. During the ride to the palace an anarchist hurls a bomb that drops in the royal carriage. The King, with great presence of mind, quickly throws it out of danger, saving his own life as well as that of his queen and many subjects. The bomb thrower is captured and instead of his death sentence the King gives him "a licking within an inch of his life" and then puts him to work, hoping to reform him. Donnaly and the King decide to send to New York for the latter's pet experiment, his airship. During the review of troops, "Jessnp," the dead King's faithful dog, barks viciously at the King's carriage, and by its other strange antics causes many to wonder, and raises marked suspicion upon the part of Duke Rudolf. The King's love for the Queen becomes apparent, but his hopes are rudely shattered when in the evening he and Donnaly discover Rudolf and the Queen in the garden, see the Duke kiss the Queen, and hear perplexing conversation. That night the palace is fired. The King and Donnaly heroically rescue the Queen and Countess. Duke Rudolf is severely questioned by Donnaly. Evidence of incendiarism is discovered and confirmed, by the anarchist who had overheard the plot. Guilt of Duke Rudolf and Count Cassell established. Rudolf denounces the King as an impostor, and is imprisoned. The King declares his love for the Queen. The spy of the Cassell party, released from the English sanatorium, is on his way to Mirtheium.

CHAPTER XIV.—CONTINUED

"Will you be my Queen?" he asked. "Come weal, come woe, my Queen?"

"I am yours now," she whispered.

"Now and forever?"

"Yes, now and forever—forever, Amos."

He kissed her softly. "We must be married at once," he said; "privately; it can easily be arranged."

"Oh, my love," she cried, "I am so, so happy; happy in the midst of all this enmity and jealousy; happy even with this smoldering volcano beneath me; happy in spite of all, because, because you love me, and I had thought you despised me."

"And I thought you despised me."

"Why, Amos?"

"Because I am a fraud; because I am an impostor."

"Oh, hush!" she cried, and closed his mouth with her hand.

He caught her in his great, strong arms. "Mine! Mine!" he cried masterfully. "Always mine!" Then, whistling a merry air, he led her from the room.

"Hush!" she said quietly. "You must still play your part; the King and Queen are estranged, you know."

"Confound it," he muttered, "so they are, or were!"

Solemnly he conducted her along the halls, before the gaping servants, and left her at the door of her apartment. Then he sought his chum, to impart the joyful news.

He found him in the state room below, talking to Count Benidect. The two men looked up as he entered.

"It's all right!" he blurted out. "Everything is all right!"

They gazed at him in mild surprise. Evidently their thoughts were running on the events of the morning.

"What's all right?" inquired Donnaly.

"Why, everything, you idiot! Don't you see? Don't you understand?"

"Oh," drawled the secretary comprehensively.

"Congratulate me, you chump," ordered the King, beaming upon them.

"I do, old man, with all my heart. Shake!"

The two chums grasped hands, while the Count looked on, somewhat bewildered.

"Let me explain," said Donnaly, with a wave of his hand. "Count, this fellow has had the impertinence to propose marriage to your niece, the Queen of Mirtheium, and I believe, from his idiotic expression and general fool bearing, has been accepted."

"Mon Dieu! Diablo! What do you say? I never thought of that, and yet, and yet—I might have done."

"You certainly might," commented the secretary dryly.

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CHAPTER XV.

IN WHICH AERIAL NAVIGATION IS DISCUSSED

The dramatic events of that morning were soon noised throughout the court and town. The most exaggerated accounts were spread. The King had shot and killed the Duke. The Duke had slain the King. Rudolf was a raving maniac. These and a dozen other wild reports were circulated around, until at last the populace were thoroughly excited. A vast crowd assembled in front of the château next morning. They cheered for the King and hooted Rudolf. Amos and his consort showed themselves once or twice during the day upon the veranda, and were received with enthusiastic cheers.

One of the first callers that morning was the Count Cassell. He expressed the deepest concern at the turn events had taken. He assured His Majesty of his constant fidelity, and begged to be allowed to see the Duke Rudolf, whom he surmised was laboring under some mental affliction.

The wary old Count was of a totally different temperament to the fiery Duke. He affected the greatest candor when speaking to the King.

"I am perfectly well aware, Your Majesty, that I am being followed wherever I go, by men of Your Majesty's service. It grieves me beyond expression to know that I do not share your confidences. But if it is Your Majesty's will that I am placed under surveillance, I bow to your decree, trusting that time will show that there is no more devoted servant in Your Majesty's realm than your humble servant."

"My dear Count," replied the King, gazing upon the viper of a man who stood cringing and bowing before him, "the exigencies of state sometimes compel us to do that which we are most reluctant to do. The Duke Rudolf, is, as you know, accused of actively participating in the firing of the palace; your name has, I grieve to say, been coupled with his, although I am free to confess no actual proof has as yet been brought to prove the charge. I join with you in lamenting this most unhappy state of affairs, and trust that the cloud will soon be lifted, and that you may be restored to our royal favor. In regard to this wild and absurd charge which the unhappy nobleman now in confinement has thought fit to bring against us—"

"Pray do not mention it, Your Majesty. It is too insane and ridiculous to speak of. We all, I trust, know too well the countenance, figure and manner of our liege lord, Leopold X., to for one moment entertain this mad idea. The Duke's mind is clearly disordered, and that, Your Majesty, must account for his treasonable and unpardonable attack upon Your Majesty's person yesterday. I must humbly beg that I may be accorded the privilege of speaking to him, and if possible bringing him to his senses. Perhaps the sight of a face of one who has always been his friend, and which he has known from his childhood, may help in bringing about this result. I crave this permission, Your Majesty."

"I regret, my dear Count, that I cannot accede to your request," replied the King shortly.

"I must, of course, bow to your decision," meekly said Cassell. "Your Majesty knows what is best," and with every show of sorrow and humility, the man departed.

"Phew!" cried Amos, as the Count left the room. "I'm glad to get rid of him; he's like a snake. Let's get down and take a look at the 'Clipper;' she's arrived, you say, and I'm tired of playing King; I want to be mechanic again."

"Yes, she's arrived, but is not unloaded yet."

"It makes no difference. We can superintend the job. I want to take a look at her."

"This island is not the best place in the world to experiment with the 'Clipper.' It's too small; there's more chance of a ducking, and I too well recollect that one we both took in the 'Sound' last year, to hunt for another. However, I will confess that I have more faith in her than I used to; she certainly behaved well on that last trip we took. You have no idea, though, old chap, what a great amount of room she occupies; she certainly is big."

"I don't doubt that for a moment. Let's go; I am anxious to get a look at her."

The two friends preferred to walk. It was always Amos' delight to get away from his regal state if possible. He was undoubtedly the most democratic king Mirtheium ever boasted. He moved around among his subjects with a most astonishing freedom. No risks or dangers, real or imaginary, stopped him. With his two good fists and a Winchester he felt well able to meet all emergencies.

They slipped out from one of the rear doors, and without a soul knowing their plans, made their way toward the water front. They left political worries behind them; they talked aerial navigation, a subject in which both were deeply interested.

"I feel perfectly sure, Donnaly, that with these additional propelers I can make not only a successful flight, for I've accomplished that already, but obtain the designed speed," remarked Amos.

"You're bull headed, old man; you are on the wrong track, I tell you. An air ship to be successful must be lighter than the air."

"Now, Jake, what's the good of thrashing all that out again. We shall never agree. It is only by practical illustrations that I shall ever convince you."

"But, my dear fellow, all modern and latest inventions are along lines in a different direction to yours."

"No, not all, by any means," demurred Amos. "Those men who take a clearer view, a readier grasp, of this problem are and have been experimenting along lines in exactly the same direction as mine. Look at Langley, for—"

"Yes, look at him!" echoed Donnaly. "The ship a failure, and the man dead."

"But that doesn't prove that he was wrong. On the contrary, he was right. I tell you, Jake, the men who imagine that a motor, electric or otherwise, can be attached to their skin bags, which are at the mercy of every wind that blows, are wrong. A few of them have succeeded in beating to windward with their crazy inventions, and because they have, they conclude they have mastered the problem of aerial navigation. Jake, they are throwing away their money and their time. Why, look here, man! To raise two pounds requires a cubic yard of gas. The forces are out of all proportion. Think of the mechanism required to drive a bag through the air on which the wind exerts its force. Why, the pressure of a very faint breeze on a vessel's sails is equal to at least four hundred horse power. What weight of machinery will your balloonist have to carry with him to resist such a force? A balloon—pshaw! Get back to the study of the birds and you will be on the right track. Now listen, old man! I will quote to you from the works of the greatest authority on this earth, a man who has come nearer to solving this aerial-navigation problem than any other. His words ring true, and I have built my clipper along the lines he advocates. In the introduction he says: 'As man has become master of the seas with his ships of oars, sails, wheel and screw, so shall he become master of the atmosphere by an apparatus heavier than air; it must be heavier, in order to be stronger than air.'

"Oh, stop, old man, my head reels—enough, enough, your idea is right—it is right—I agree to everything."

It was hard work to choke off the enthusiastic inventor, once he had mounted his hobby, but luckily for Donnaly they had reached the quay by this time, and Amos' attention was taken up in the examination of the "Clipper's" parts. He had them all carefully removed from the steamer's hold to the château grounds. A large building stood there, which had been used as a skating rink in times past. It served admirably for his purpose, and all that day he and Donnaly were busy arranging and sorting out the various parts. So interested did the King become, and so much engrossed was he in his hobby, that he could scarce be induced to attend to the many pressing matters which demanded his attention. The old Count Benidect at last came in person to beg of him that he would confer in private with him.

"We must," he said, "make some arrangements to meet this incoming mail boat, which is due three days from now. Do you not see that should this man fall into the hands of the Cassell party, and he will, undoubtedly, unless we prevent it, their hands will be greatly strengthened. They will have obtained a trump card which they can play at any time."

"And there is," remarked Donnaly, with a mock bow, "the trivial matter of Your Majesty's marriage, which I understand it is your wish and the Queen's should take place immediately."

Count Benidect coughed embarrassingly.

"That," he said, "must be arranged with considerable tact. It must, of course, be private, and I confess I scarce know how to approach it. I do not know who we can trust sufficiently to solemnize it. The court chaplain I dare not trust; he is not a man to whom I would wish to confide a secret."

"There are others, though, perhaps," suggested Donnaly.

"We must see to it."

The King, blushing like a schoolboy, began to look uneasy. "I—I would like it to take place soon," he stammered at last.

"We shall see, we shall see," said the Count in a fatherly way, as he patted Amos on the back.

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CHAPTER XVI.

IN THE DARK

"All right, old fellow," said Donnaly the next morning, as Amos announced his intentions of repairing to the rink to "monkey," as the secretary expressed it, with his hobby. "All right, you go ahead. I have other matters to attend to just now. You'll excuse me, I'm sure. I'll be gone three days, perhaps."

"Three days!" echoed Amos. "What for?"

"To make sure of meeting this fellow, of course. I am not going to take any chances with him. He and Rudolf will look very nice in the same strong room together, I think. I am sailing on the tug 'Dove' at noon to-day, and I'll meet the gentleman and welcome him in the offing upon his arrival."

"All serene, then. I'll trust to you for that." Amos was visibly relieved.

Later he conducted the Queen to see his pet, and together they examined and admired its really magnificently finished parts.

As each section was completed it was removed to the open, and there the "Clipper" rapidly assumed its shape.

It certainly looked a most singular object, as it lay there, with its glistening steel sides, and forest of slender shafts rising about it. With a length of seventy-eight feet, it possessed a beam of only nine feet. Its hull was the usual cigar-shape, and from each end projected a large steel screw—its rudders. At the summit of each of its sixty-four shafts was mounted a fan, similar to the air-current producing fans commonly in use. A small deck house broke the smooth deck amidship. Below, in the center, were the electrical engines which worked the fans and screws, and at the bow, quarters for five men, while the stern afforded room for an equal number.

The few days that followed were some of the happiest in Amos' life. With his beloved, the clouds between them swept away, he reveled in the sunshine of her smile.

On the third day Donnaly returned at dead of night with his prisoner, and the fellow was lodged in a cell in the old palace prison, about half a mile from the château, on the marine road.

Although allowed considerable freedom, Rudolf was still kept in durance vile: it had not yet been decided just what should be done with him, and meanwhile events were hastening on to that climax which was not only to bring disaster to Mirtheium, but to horrify the whole world, and to bring into prominence the little isle, which for

centuries had laid almost neglected and unnoticed amid the bustle and clamor of modern nations.

These were busy days for the two Americans, Donnaly with the numerous details of state, and the King with his two love affairs—his Queen and his air ship. His air-ship talk became a bore to Donnaly, although he was satisfied that the King had the solution of the conquest of the air well in hand. He followed closely the idea of the authority, whom he quotes in his talk to Donnaly.

"'The bird flies, not like a balloon, but a piece of mechanism. The albatross gives ten beats of his wings a minute; the pelican, seventy; the bee, a hundred and ninety-two a second, while the common house fly gives three hundred and thirty-six, and a mosquito gives a million or more. Now, it is well known that as the weight of a flying animal increases, the less is the proportional increase in the surface beaten by the wings in order to sustain it, although the motion of the wings becomes slower. A flying machine must therefore be constructed to take advantage of these natural laws—in other words, to imitate the birds.' Now, in my clipper I depend on two movements of the fans—the one to hold it suspended in the air, the other to drive it along."

Little did Donnaly or Amos dream how soon the "Clipper" would be put to the real test and what an important part it would take in their lives.

The marriage of the King and Queen took place at midnight of Good Friday. Never was there a weirder or stranger nuptial service. As the Count Benidect has said, it required considerable forethought to arrange it. The court chaplain was not considered a suitable person; he was not to be trusted. It happened, however, that about that time a priest of the Greek Church was visiting the island capital, and he was approached regarding the matter.

As usual, it was on Donnaly that the bulk of the work fell. It was he who, disguised with wig and whiskers, consulted the reverend man and stated the case.

"It is this way, sir," he said. "In the King's château are two exalted personages, whose names must, for the present, remain a secret from you. It is desired by His Majesty that they should be united in the holy bonds of wedlock, but that no one outside of his royal self and the necessary witnesses should be cognizant of the ceremony. He pledges his royal word that all things are as they should be, and that it is simply for state reasons that it must take place. The woman has been married before; the man has not."

"Is the woman divorced, or is her husband dead?" inquired the priest.

"He is dead; has been dead for some months."

"I see no reason why I could not unite them, then."

"There is one other restriction which must be observed. You cannot be allowed to see either of the faces of the two. The marriage must take place without lights."

"That is a very singular request, sir."

"It is done," replied the secretary truthfully, "in order that you may never be able to say you have seen them; so that you may never be able to identify them. You see, I am perfectly plain with you. It is best to be in such a case."

"Sir, I honor your veracity; it does you credit. I will undertake this office. When and where does His Majesty require me?"

"A carriage will be sent for you to-morrow at 11 P. M. You will be driven to the château and there do your offices. I need not mention, sir, that His Majesty will reward you liberally for your services."

"I thank him in the name of the Church. Such as he gives will be delivered to the Church. I am a poor man, but I need nothing in this world's goods; the Holy Church gives me all I need."

"You will, of course, pledge yourself to the utmost secrecy, sir. This marriage must never be divulged without His Majesty's consent. You acquiesce to this?"

"I do. The Church guards well her secrets, my son."

"Then the carriage will be here at eleven o'clock to-morrow night."

"It will find me waiting."

"I bid you good-night, Father."

"Good-night to you, my son."

The ceremony was to take place in the circular council room of the château at midnight. Excepting the two principals, only four people were in the secret, and that four included the priest. The Count Benidect, the Countess and Donnaly formed the required witnesses and sponsors. A trusted coachman was despatched to bring the priest to the palace.

All went well. Punctually at eleven-thirty he arrived, and was at once conducted by Donnaly to a private waiting room. In the council chamber all was dark. All lights were extinguished. The Count and Countess, with the King and Queen, were waiting in silence, as Donnaly brought in the man of God. He was led to a table in the center of the room. All was ready.

"Their names? I must have their names," whispered the priest. "They must be the true names. I charge you this."

"You shall have them," replied Donnaly quietly. "The man is called Amos Edward Jackson; the woman is Edna Naoma Ada Vaultineer."

The priest visibly started. He was marrying a lady of the royal house; the name Vaultineer he knew well. "It is well. We will proceed," he said quietly.

[TO BE CONTINUED NEXT ISSUE]

Commissioner Smith vs. The Standard Oil Co.

From the Railway World, January 3, 1908.

Mr. Herbert Knox Smith, whose zeal in the cause of economic reform has been in no wise abated by the panic which he and his kind did so much to bring on, is out with an answer to President Moffett, of the Standard Oil Company of Indiana. The publication of this answer, it is officially given out, was delayed several weeks, "for business reasons," because it was not deemed advisable to further excite the public mind, which was profoundly disturbed by the crisis. Now that the storm clouds have rolled by, however, the Commissioner rushes again into the fray.

Our readers remember that the chief points in the defence of the Standard Oil Company, as presented by President Moffett, were, (1) that the rate of six cents on oil from Whiting to East St. Louis had been issued to the Standard Oil Company as the lawful rate by employes of the Alton, (2) that the 18-cent rate on file with the Interstate Commerce Commission was a class and not a commodity rate, never being intended to apply to oil, (3) that oil was shipped in large quantities between Whiting and East St. Louis over the Chicago and Eastern Illinois at six and one-fourth cents per hundred pounds, which has been filed with the Interstate Commerce Commission as the lawful rate, and (4) that the 18-cent rate on oil was entirely out of proportion to lawful rates on other commodities between these points of a similar character, and of greater value, such, for example, as linseed oil, the lawful rate on which was eight cents. President Moffett also stated that thousands of tons of freight had been sent by other shippers between these points under substantially the same conditions as governed the shipments of the Standard Oil Company.

This defence of the Standard Oil Company was widely quoted and has undoubtedly exerted a powerful influence upon the public mind. Naturally the Administration, which has staked the success of its campaign against the "trusts" upon the result of its attack upon this company, endeavors to offset this influence, and hence the new deliverance of Commissioner Smith.

We need hardly to point out that his rebuttal argument is extremely weak, although as strong, no doubt, as the circumstances would warrant. He answers the points made by President Moffett substantially as follows: (1) The Standard Oil Company had a traffic department, and should have known that the six-cent rate had not been filed, (2) no answer, (3) the Chicago and Eastern Illinois rate was a secret rate because it read, not from Whiting, but from Dolton, which is described as "a village of about 1,500 population just outside of Chicago. Its only claim to note is that it has been for many years the point of origin for this and similar secret rates." The Commissioner admits in describing this rate that there was a note attached stating that the rate could also be used from Whiting.

The press has quite generally hailed this statement of the Commissioner of Corporations as a conclusive refutation of what is evidently recognized as the strongest rebuttal argument advanced by the Standard.

In fact, it is as weak and inconclusive as the remainder of his argument. The lines of the Chicago and Eastern Illinois do not run into Chicago. They terminate at Dolton, from which point entrance is made over the Belt Line. Whiting, where the oil freight originates, is not on the lines of the Chicago and Eastern Illinois, which receives its Whiting freight from the Belt Line at Dolton. The former practice, now discontinued, in filing tariffs was to make them read from a point on the line of the filing road, and it was also general to state on the same sheet, that the tariff would apply to other points, e. g., Whiting. The Chicago and Eastern Illinois followed this practice in filing its rate from Dolton, and making a note on the sheet that it applied to Whiting. This was in 1895 when this method of filing tariffs was in common use.

Now let us see in what way the intending shipper of oil could be misled and deceived by the fact that the Chicago and Eastern Illinois had not filed a rate reading from Whiting. Commissioner Smith contends that "concealment is the only motive for such a circuitous arrangement," i. e., that this method of filing the rate was intended to mislead intending competitors of the Standard Oil Company. Suppose such a prospective oil refiner had applied to the Interstate Commerce Commission for the rate from Chicago to East St. Louis over the Chicago and Eastern Illinois, he would have been informed that the only rate filed with the commission by this company was 6¼ cents from Dolton, and he would have been further informed, if indeed he did not know this already, that this rate applied throughout Chicago territory. So that whether he wished to locate his plant at Whiting, or anywhere else about Chicago, under an arrangement of long standing, and which applies to all the industrial towns in the neighborhood of Chicago, he could have his freight delivered over the Belt Line to the Chicago and Eastern Illinois at Dolton and transported to East St. Louis at a rate of 6¼ cents. Where then is the concealment which the Commissioner of Corporations makes so much of? Any rate—from Dolton on the Eastern Illinois, or Chappell on the Alton, or Harvey on the Illinois Central, or Blue Island on the Rock Island, applies throughout Chicago territory to shipments from Whiting, as to shipments from any other point in the district. So far from the Eastern Illinois filing its rate from Dolton in order to deceive the shipper, it is the Commissioner of Corporations who either betrays his gross ignorance of transportation customs in Chicago territory or relies on the public ignorance of these customs to deceive the public too apt to accept unquestioningly every statement made by a Government official as necessarily true, although, as in the present instance, a careful examination shows these statements to be false.

The final point made by President Moffett that other commodities of a character similar to oil were carried at much lower rates than 18 cents, the Commissioner of Corporations discusses only with the remark that "the 'reasonableness' of this rate is not in question. The question is whether this rate constituted a discrimination as against other shippers of oil," and he also makes much of the failure of President Moffett to produce before the grand jury evidence of the alleged illegal acts of which the Standard Oil official said that other large shippers in the territory had been guilty. Considering the fact that these shippers included the packers and elevator men of Chicago the action of the grand jury in calling upon President Moffett to furnish evidence of their wrong-doing may be interpreted as a demand for an elaboration of the obvious; but the fact that a rate-book containing these freight rates for other shippers was offered in evidence during the trial and ruled out by Judge Landis was kept out of sight. President Moffett would not, of course, accept the invitation of the grand jury although he might have been pardoned if he had referred them to various official investigations by the Interstate Commerce Commission and other departments of the Government.

We come back, therefore, to the conclusion of the whole matter, which is that the Standard Oil Company of Indiana was fined an amount equal to seven or eight times the value of its entire property, because its traffic department did not verify the statement of the Alton rate clerk, that the six-cent commodity rate on oil had been properly filed with the Interstate Commerce Commission. There is no evidence, and none was introduced at the trial, that any shipper of oil from Chicago territory had been interfered with by the eighteen-cent rate nor that the failure of the Alton to file its six-cent rate had resulted in any discrimination against any independent shipper,—we must take this on the word of the Commissioner of Corporations and of Judge Landis. Neither is it denied even by Mr. Smith that the "independent" shipper of oil, whom he pictures as being driven out of business by this discrimination of the Alton, could have shipped all the oil he desired to ship from Whiting via Dolton over the lines of the Chicago and Eastern Illinois to East St. Louis. In short, President Moffett's defence is still good, and we predict will be so declared by the higher court.

The Standard Oil Company has been charged with all manner of crimes and misdemeanors. Beginning with the famous Rice of Marietta, passing down to that apostle of popular liberties, Henry Demarest Lloyd, with his Wealth Against the Commonwealth, descending by easy stages to Miss Tarbell's offensive personalities, we finally reach the nether depths of unfair and baseless misrepresentation in the report of the Commissioner of Corporations. The Standard has been charged with every form of commercial piracy and with most of the crimes on the corporation calendar. After long years of strenuous attack, under the leadership of the President of the United States, the corporation is at last dragged to the bar of justice to answer for its misdoings. The whole strength of the Government is directed against it, and at last, we are told, the Standard Oil Company is to pay the penalty of its crimes, and it is finally convicted of having failed to verify the statement of a rate clerk and is forthwith fined a prodigious sum, measured by the car. Under the old criminal law, the theft of property worth more than a shilling was punishable by death. Under the interpretation of the Interstate Commerce law by Theodore Roosevelt and Judge Kenesaw Landis, a technical error of a traffic official is made the excuse for the confiscation of a vast amount of property.

Advertisement

Common Sense and Common Remedies

BY HILDA RICHMOND

Exercise

One great reason why housekeepers do not use simple means to get well is that they look upon such things as observing rules as to diet, exercise and fresh air as fads or things for rich people to do, rather than for people who really want to get well and stay well. Anything they can buy in a bottle they will cheerfully swallow, but as soon as the doctor begins to tell them of the virtues of fresh air and exercise they hunt up some quack who will supply the doses they long for, and call the reliable physician a crank. And they will tell you solemnly that they can find time to take medicine, but no time for exercise or rest. The person who really wants to get well will find time for anything a good doctor recommends, but some people enjoy being miserable.

Strange as it may seem, there are ladies all over the land who think taking exercise means dressing in bloomers and going through a lot of strange motions. They look with horror on the pictures set forth by certain magazines, and piously thank their stars that they still have their senses. Now, the exercises illustrated in the magazines are all right for people who are cramped in narrow bedrooms and offices, and have not the fields and country roads and gardens to exercise in, but it is not necessary for all ladies to blindly follow the instructions. There are many and various ways of getting health through exercise, and most of the forms in vogue in the country are enjoyable as well as profitable.

Constipation, which is at the root of most ills, may be disposed of by walking or riding—not walking about the house doing work, but walking out of doors for pleasure. The common complaint of most housekeepers is that they get too much exercise, when in reality they mean they stand by their tables ironing, baking, preparing vegetables and doing the dishes. Of course, they move about here and there from kitchen and porch to sitting room and upstairs, but a walk of a mile would cause them to declare they were "dead tired." A walk across a field or through the woods to visit a friend looks like too much of an undertaking, so they sit down at home to sew or knit, and think themselves very virtuous, because they do not "gad around" as some of the neighbors do. The woman who "gads" may not be one of the overneat housekeepers, but she usually has rosy cheeks and a good temper. There are many country ladies who would not undertake to walk five miles under any circumstances, yet there is no more healthful exercise than walking.

Gardening in the summer furnishes pleasant and profitable outdoor employment for women—not gardening that means heavy work for overtaxed arms, but rather the raising of choice flowers and vegetables in the small garden near the house. Every farmer should have his real garden so arranged that it may be cultivated by horse power in long rows, but the small space near the house usually belongs to the ladies of the family. Here the light work in the open air will banish many complaints and bring joy to the flower lover until frost nips the buds.

In winter the problem of exercising is more difficult to solve. In a light jacket and with her hair protected by a cloth, the mistress of the house may sweep with doors and windows flung wide, and fling her bedding and rugs to the winter breezes; but sweeping thoroughly and airing bedding are not every-day tasks. Warmly clad, feeding chickens, taking down the clean clothes and doing the light chores about the house will bring a glow to the cheeks and set the blood tingling through the veins, but never when done by a shivering woman. The lady who has no time to put on stout shoes and plenty of wraps for her outdoor work will derive no benefit from it.

Few are the ills that flesh is heir to that exercise will not help, even if a cure cannot be effected. Getting the blood in circulation means that waste matter will be thrown off and good, rich blood sent dancing through the veins. Sluggish liver, cold feet, headache, sleeplessness, poor appetite, languidness—the list is too long to give of the ills that may be routed by persistent walking, driving, gardening and other exercises. One walk a week will not cure anything, but it may lead the sufferer to see the delights of being out of doors and bring about a reformation. If any housekeeper thinks she has no time to get away from her home duties she may be sure there is something wrong with her manner of living. She may be able to stand the work day in and day out for some years, but the time will come when Nature will demand her dues. If only young wives and mothers could realize that they owe a duty to themselves as well as to their families, there would be fewer motherless children in the world. It isn't devotion and heroism that makes a woman break down her health early in life, but foolishness. Common sense applied to most of the ills of life would dispel them, but some people find that out too late.

◈

Basket Plants from Seed

BY LAURA JONES

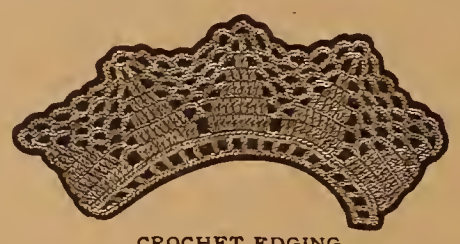
Every one who grows flowers likes to have a few trailers or basket plants. One can get an inexpensive start of these, and have a well-filled basket of some of the daintiest and prettiest of trailers in a short time from seed sowing, while the ready-made baskets of greenhouse plants are very expensive, and one will have to wait a long time until they are large enough for any display. The greenhouse trailers can be kept from year to year, and they increase in size and beauty each year, but many growers have no place for them over winter, and wish only the plants that reach perfection in one season. The Kenilworth ivy is one of the daintiest and prettiest bits of greenery that can be grown, and the dainty little flowers make it doubly attractive. One can raise enough plants from one packet of seed for two hanging baskets. A packet will cost from three to five cents, and nearly every seed will germinate. The seed is very fine and must be lightly covered.

The nolana is a desirable basket plant, producing small, bell-shaped, sky-blue flowers.

The maurandia is a graceful trailer, with handsome, dense foliage, and produces dainty white, maroon and rose-colored blossoms. This keeps green until after severe frosts.

The weeping lantana is a fine basket plant easily grown from seed, and is always in flower. The foliage is very pretty.

The basket plants require more water than almost any other plants, as they dry out so badly in their exposed positions. They are not attractive unless they are given sufficient moisture to keep them a dainty green. It is a good plan to take down the baskets once a week—twice if the weather is very dry—and give them a soaking in a pail of water for ten minutes. Pouring water on the soil seldom ever does them any good, as it does not reach the roots. This method also is apt to wash out the soil of the wire baskets lined with moss.



CROCHET EDGING

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How to Make Neat Crochet Edging

BY JOYCE CAVENDISH

Make a chain the length required for the piece of lace.

First row—Put 1 d c into every fourth stitch, with 2 ch between.

Second row—1 s c into every d c and 2 s c into every hole.

Third row—10 d c into first 10 s c, * ch 4, skip 2 s c, 10 d c into next 10 s c *. Repeat.

Fourth row—* 8 d c into 10 d c, ch 4, s c in hole between, ch 4 *. Repeat.

Fifth row—* 6 d c into 8 d c, ch 4, s c in loop, ch 4, s c in loop, ch 4 *. Repeat.

DAINTY COVER FOR DRESSER

Sixth row—* 4 d c on 6 d c, ch 4, s c in loop, ch 4, s c in loop, ch 4, s c in loop, ch 4 *. Repeat.

Seventh row—* 2 s c on d c, 5 chains of four, catching into loops *. Repeat.

Eighth row—* 1 s c on d c, 6 chains of four, catching into loops *. Repeat.

Ninth row—Ch 4, s c in first loop. Repeat for whole length.

◈

Knitted Block for Bedspread

BY MRS. J. R. MACKINTOSH

Cast on two stitches on each of four needles (eight in all) and knit with a fifth needle, always going forward.

First row—* over, knit one; repeat from *. (Sixteen stitches in all at end of row.)

Second row—Knit plain.

Third row—Over, knit plain, repeat. Thirty-two stitches in all.

Fourth row—Purl 1, knit 5, purl 1, knit 1, clear around.

Fifth row—Over, knit 3, over, knit 1.

Sixth row—Purl 2, knit 10.

Seventh row—Over, knit 5, over, knit 1.

Eighth row—Purl 3, knit 9, purl 3, knit 1.

Ninth row—Over, knit 7, over, knit 1.

Tenth row—Purl 4, knit 11, purl 4, knit 1.

Eleventh row—Over, knit 9, over, knit 1.

Twelfth row—Purl 5, knit 13, purl 5, knit 1.

Thirteenth row—Over, knit 11, over, knit 1.

KNITTED BLOCK FOR BEDSPREAD

Fourteenth row—Purl 6, knit 15, purl 6, knit 1.

Fifteenth row—Over, knit 13, over, knit 1.

Sixteenth row—Purl 7, narrow, knit 13, narrow, purl 7, knit 1.

Seventeenth row—Over, knit 29, over, knit 1. Every odd row the same until the thirty-first.

Eighteenth row—Purl 8, narrow, knit 11, narrow, purl 8, knit 1.

Twentieth row—Purl 9, narrow, knit 9, narrow, purl 9, knit 1.

Twenty-second row—Purl 10, narrow, knit 7, narrow, purl 10, knit 1.

Twenty-fourth row—Purl 11, narrow, knit 5, narrow, purl 11, knit 1.

Twenty-sixth row—Purl 12, narrow, knit 3, narrow, purl 12, knit 1.

Twenty-eighth row—Purl 13, narrow, knit 1, narrow, purl 13, knit 1.

Thirtieth row—Purl 14, slip 1, knit 2 together, slip stitch over, purl 14, knit 1.

Thirty-second row—Over, narrow, fifteen times, over, knit 1 twice.

Thirty-third, thirty-fifth and thirty-seventh rows plain.

Thirty-fourth row—Over, narrow sixteen times, over, knit 1 twice.

Thirty-sixth row—Over, narrow seventeen times, over, knit 1 twice.

Purl 37, knit 1, for three rows and bind off. Use medium-sized steel needles and No. 12 knitting cotton or coarser cotton and coarse needles. Worked with No. 12 knitting cotton will make a block about six and one half inches square. The blocks may be set together, or put together with knitted stripes.

◈

Easily Constructed Dresser Covers

BY CATHERINE O'BRIEN

Many dainty and beautiful pieces for one's bedroom may be made from handkerchiefs. Shams for the pillows and scarfs for the dresser and wash stand being among the many.

For the pillow shams four hemstitched embroidered handkerchiefs are required. These are joined together with beading, so as to form a square. The beading is then sewed all the way around the handkerchiefs, and lace is then gathered around the beading, and baby ribbon run through the beading, finishing each corner and the center where the handkerchiefs join with a rosette of the baby ribbon.

For the dresser three handkerchiefs are used, being joined together with beading and finished with lace and baby ribbon.

For the wash stand and splasher two handkerchiefs for each one are used, and they are made in the same way as the dresser scarf.

The lace used for the set is about three inches in width, while beading wide enough for three rows of ribbon makes it very beautiful, although narrower beading may be used with equal satisfaction. Light blue, pink, yellow or any color ribbon may be used.

These four pieces make a very dainty, beautiful and at the same time inexpensive set for one's bedroom.

◈

The Puddings of My Cousins and My Aunts

BY MARY FOSTER SNIDER

Aunt Kate's Rice Pudding—Wash half a pound of rice until the water drains away perfectly clear, then let simmer gently in one quart of milk until quite tender. Add three tablespoonfuls of caster sugar, and flavor with vanilla. Rinse out an oval mold with cold water, and put in the rice, pressing it down firmly. Remove all skin and pith from four or five Tangerine oranges, divide them into their natural divisions and take out the seeds. Boil one pound of loaf sugar in one half cupful of water until the sirup feels sticky, then pour it over the oranges in a bowl. When time to serve, turn the rice out on a large glass dish, and when the oranges are cold arrange them neatly around the rice. Pour over the sirup, and serve.

Aunt Gwen's Favorite—Peel and core eight large apples, and cut in quarters. Put one tablespoonful of butter into an enameled sauce pan, add the apples, a little grated lemon peel, the juice of half a lemon and one half cupful of water. When cooked to a pulp add a breakfastcupful of granulated sugar. Cook three tablespoonfuls of well-washed rice in just enough milk to keep it from burning. When quite tender mix it lightly with the apple pulp. Line the edges of a shallow pudding dish with puff paste. Add to the apple-and-rice mixture two ounces of mixed candied peel cut in tiny chips, the beaten yolks of two eggs and a glass of sherry or rich canned fruit juice. Mix thoroughly together, then stir in lightly the stiffly whipped whites of two eggs. Put this mixture into the pudding dish, and bake in a moderately quick oven until the pastry is quite cooked. Serve hot. Delicious with or without whipped cream.

Aunt Ella's Own—Chop half a pound of suet very fine, and mix it with half a pound of sifted flour. Press half a pound of boiled potatoes through a sieve, and mix them with the flour and suet. Add one half teaspoonful of salt. Mix in one fourth of a pound each of stoned raisins and cleaned currants, four ounces of mixed candied peel cut in very small thin chips, three fourths of a cupful of sugar, and a little grated nutmeg and lemon peel. Add just enough sweet milk to mix it to a dry dough. Place it in a buttered mold, cover with a well-floured cloth, tie down tightly, and steam for five hours. Turn it out when done, and serve at once with orange sauce. For this squeeze the juice from two sweet oranges and strain it into an enameled sauce pan. Thicken it slightly with a teaspoonful of corn starch dissolved in a very little cold water, add sugar to taste, and let it boil a few minutes, stirring it constantly.

Cousin Ethelinda's Holiday Pudding—Butter a pudding dish well and line it with thin slices of buttered bread, having the crust removed and cut into pieces to fit neatly together. Spread thickly with rich mincemeat and fill up the dish with alternate layers of the buttered bread and mincemeat. For a two-quart pudding dish make a custard with three cupfuls of milk, three well-beaten eggs, a pinch of salt, two and one half tablespoonfuls of powdered sugar and three fourths of a teaspoonful of lemon extract or one tablespoonful of wine. Pour this gradually over the mincemeat and

bread and let soak for an hour, then bake in a slow oven for forty minutes. Turn it out of the dish carefully, and serve very hot with a sweet liquid sauce.

COUSIN CECIL'S FAVORITE—Put three ounces of bread crumbs and one pint of milk in a stew pan, and let it stand on the back of the range until the milk is hot and the crumbs are well soaked, then beat it until perfectly smooth. Add the well-beaten yolks of two eggs, six tablespoonfuls of granulated sugar, a pinch of salt and a little grated lemon peel. Butter a pudding dish, put in a thin layer of apricot or peach jam, then put in two pounds of apples that have been peeled and cut in thin slices. Pour the milk and bread mixture over this, and bake very slowly until

EMBROIDERY SHOE FOR BABY

the apples are quite soft. When done, spread another layer of the jam over the top, and heap the white of the eggs, whisked to a stiff froth with two tablespoonfuls of powdered sugar, over the top. Let it brown very delicately, and serve at once.

◈

Planting Sweet Peas Early

BY LAURA JONES

THERE is no more popular flower to-day than the sweet pea. It is grown by rich and poor alike. It requires cultivation, and the flowers must be cut daily; but then one is well repaid for their trouble by an abundance of the fragrant blossoms, and the work is often beneficial to one's health.

If seed is sown just as soon as the ground can be worked in the spring—February is best, if the ground is dry enough to work—the roots will push down deeply in the soil and will be so much better to withstand the heat of early summer. The plants from seed sown late are seldom successful, as the roots take but shallow hold and do not withstand the heat.

The seed should be planted in rows running north and south. Sow in trenches six inches deep, and cover about one inch until the young plants appear, then hoe up this soil a little at a time. The sweet pea requires thorough cultivation once a week as long as in bloom, and a small hoe will be very helpful here. In dry seasons the plants must be watered often, but a good hoeing will be almost as beneficial as a pailful of water. When watering, apply enough to thoroughly soak the roots; just a little water on top of soil is of little or no benefit.

As to supports, closely-woven chicken netting is best, but where this cannot be had, brush will answer.

One must procure good seed in the beginning. Where one saves their own seed, they are apt to have the flowers all of one color, but in buying even the mixed seed one is apt to secure enough of a variety to keep up interest in them. The double sweet peas are almost as pretty as a rose.

There is no flower grown that is a greater missionary than the sweet pea during the summer; it is sent into all sick rooms, and many a sad heart is cheered by the beauty and fragrance of these flowers, that have cost the giver no sacrifice, for there will be two flowers for every one cut.

◈

Making a Bolster Roll

BY MAUDE E. S. HYMERS

I HAD long wanted a bolster roll, but on pricing them at the stores I decided that the price was entirely beyond my purse, even beyond reason. I did, however, take time to examine the roll closely, and once at home began casting about in my mind for material with which to copy it.

A discarded cheese box twelve inches in diameter gave me the end pieces, and several strips of thin wood left over from the recent house building I knew would provide the "ribs." The sides of the box and the rim of the cover were of course discarded, the circles of wood alone being retained, and these strengthened by thin cleats nailed on the inner side. The strips of wood, which were about the size of common lathing and fifty-three inches long, were nailed to the circles—one at each end. The strips were nailed about an inch apart nearly all the way around the circles, leaving an opening of about eleven inches on the under side, into which the pillows are to be tucked when not in use for sleeping purposes.

A piece of heavy wire (from a discarded wire clothes line) was bent to a circle and fastened in the middle of the bolster. This was to ensure strength and prevent the bolster sagging in the middle under the weight of the pillows. A third circle of wood might be used, I suppose, but it might make the bolster heavy and ungainly to lift.

The completed skeleton in hand, I began by covering its ribs, both inside and out, with cheap white cotton tacked on smoothly. The end pieces had a couple of layers of wadding applied first, so as to give a slightly round appearance to the end pieces when done. Next came the colored lining—in my case a good quality of yellow sateen—this colored foundation being basted to the cotton foundation, to avoid the glaring of tacks.

Over this went the lace cover (let me whisper, the upper portion of a discarded lace curtain!), laid smoothly over the color and basted into place without gathers. For the end pieces a strip of material about twenty inches wide was used, one edge folded over, through which to run ribbon, and long enough to go smoothly around the outer edge of the circle. The ribbons were pulled up and tied in a bow in the center, thus completing an inexpensive, yet very satisfactory, bolster roll.

◈

Keeping the Home Sweet

ONE of our good subscribers, in writing us, expresses the wish undoubtedly of many farmers' wives, when she says that she likes her home and things about it to be sweet.

A simple perfume will not entirely do the work, for cleanliness is a great essential. However, the following is worth remembering when you want to give the general atmosphere in your home a pleasant odor.

Mix equal parts of oil of cloves, oil of cinnamon, oil of wintergreen and oil of sassafras. Drop a few drops down a hot-air flue or on top of a stove to disinfect and perfume the atmosphere of a room.

◈

Embroidery Shoe for the Baby

BY CAROLINE WETHERELL

A SHOE for the baby, made of a piece of wide embroidery, is illustrated on this page. The soles may be cut from some heavy material and the inside lined with washable silk. Bands and bows of ribbon are attached, for tying the shoe to the foot. The upper part of the shoe may be cut in one or two pieces, as is most convenient.

◈

For Love of Wifie

BY W. B. K.

To drudge is man's destiny, darling;
Fate's law yokes desire with work.
Yet the needs of earth's sojourn how paltry and few!
To day dream may not mean to shirk.
But thought of your welfare and comfort
Impels me to rouse and to do;
Then give me a kiss, my girlie,
And I will toil for you.

A tyrant is ambition, darling;
He drives with relentless lash.
That hope may be crowned at the common goal
What hopes in the race must crash!
But to wreathe your brow I'll struggle
Through the wrecks that the race course strew;
Then a smile and a kiss, my girlie,
And I will strive for you.

Though ancient as memory, darling,
Man's wont for his rights to fight,
A higher, diviner rule forbids
To right one's wrongs by might.
But, while thrusts at self-ignoring,
I'll be your champion true;
Then a tender kiss, my girlie,
And I will strike for you.

Doubt darkens the great beyond, darling;
Faith knows not where to turn;
And dim and low Religion's fires
On her crumbling altars burn.
But our love must be immortal—
Love old, yet ever new:
Then a warm, glad kiss, my girlie,
And I will trust for you.

The impulse of life is strong, darling;
And strong is the dread of death;
And we cling to the links of mind and sense
E'en down to our parting breath.
But midst fair, flown days your dear life
Than my own life nearer grew:
Then a kiss and caress, my girlie,
And I will die for you.

What guerdon have earth's cares, darling?
What meed hath human strain?
How welcome a dart to the bursting heart—
Or a bane to the goaded brain!
But 'tis sweet, bearing love's sweet burdens,
To endure the long years through;
Then a fond, fond kiss, my girlie,
And I will live for you.

Chocolate Pudding

INGREDIENTS: One half cupful of caster sugar, five tablespoonfuls of grated chocalate, three eggs, one pint of milk, one teacupful of grated bread crumbs and extract of vanilla to taste.

Method: Mix the dry ingredients well together, beat the yolks of the eggs with the milk, add the flavoring; pour into a buttered dish, and bake for twenty minutes in a moderate oven. Whip the whites until stiff, drop in piles over the pudding, and replace in the oven for a few minutes with the oven door open. As soon as the white is slightly brown the pudding is done. This sweet should be eaten cold.

◈

Attention, Housewives!

ALMOST every mail we receive communications from housewives, asking about certain matters or offering contributions to our pages. These articles are often unsigned, or contain only initials, and sometimes the address is omitted. We are, of course, unable to either answer or give such communications any consideration at all. If all the housewives who write to us would remember to give their full name and address, they would prevent annoyance of all concerned.

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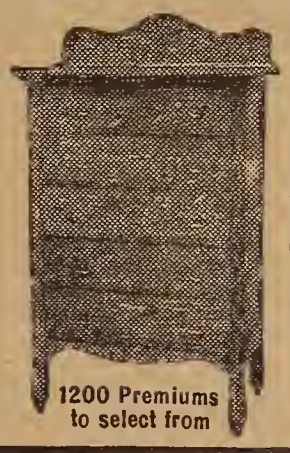

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BUY A BICYCLE THAT'S RIGHT

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THE YALE AND THE SNELL

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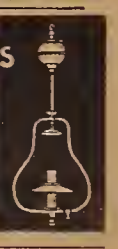

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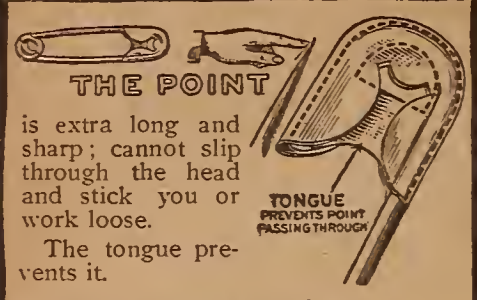

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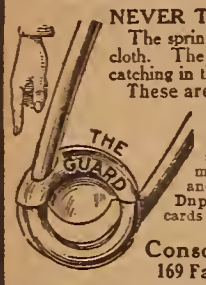

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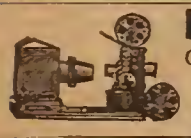

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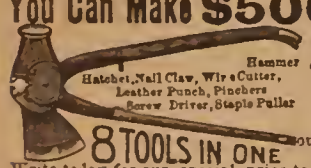

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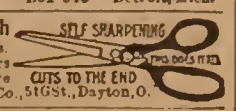

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Miss Gould's Fashion Page

No. 1082—Dress With Dutch Neck
Sizes 6, 8 and 10 years

SINCE it is now the vogue for women to look tall and slender, the Princess dress with its long lines is the height of fashion. The cut-in-one gown showing a touch of white at the neck will be the favorite model for dresses, in all sorts of fabrics this spring. Silk gowns will be made in this way, worn with a guimpe of lace or filet net, while the Princess dress in mohair, panama, light-weight cheviot and all the long list of new cottons will be equally fashionable.

The Princess dress illustrated on this page, which is made with a panel front, is a particularly modish and good-style gown. The pattern provides for the extra lace sleeves, which are included in the armseye with the puff sleeve, and it also gives the adjustable chemisette. However, the gown may be worn with any fitted guimpe.

No. 805—Princess Dress With Panel Front
Pattern cut for 34, 36, 38 and 40 inch bust measures

No. 1083—Jumper Dress With Guimpe
Sizes 6, 8, 10 and 12 years

Send all orders for patterns illustrated on this page to the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City. In writing for patterns be sure to give the number desired, the age of child in ordering children's clothes, and the bust or waist measure when desiring clothes for women.

EVERY woman is carrying a bag these days, and they vary in price from a dollar to a hundred dollars. Those the fashionable woman likes best are the odd ones. The frog bag here illustrated is a French novelty and is made of gray suede with the skin of a real frog applied to it.

An Old Skirt Which Is Too Tight, This Makes Creases at the Hips, the Placket Gap and the Whole Skirt Too Short

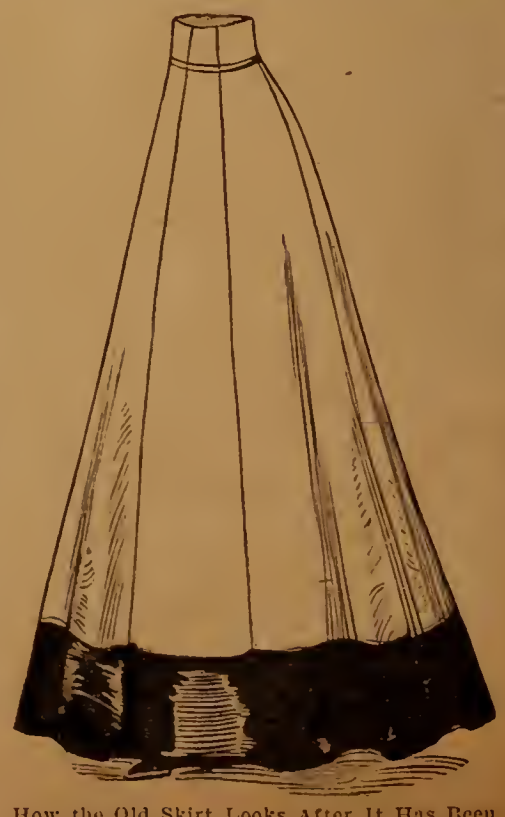
IF YOU happen to have grown stouter during the past year you will be discouraged enough at the way your skirts look. Whether they are gored skirts or plaited models, they will draw up and wrinkle at the waist, the plackets will gap and the whole skirt look uncomfortably tight and will crease around the hips. This of course will tend to shorten the skirt that is already quite short enough, and the whole effect is apt to discourage the woman who does her own sewing. Now, there are times when skirts of this description are not worth working over. Then, again, the material may be expensive, and the jacket or waist which forms the upper part of the costume may have a distinctly smart and up-to-date look. If this is the case, it may pay you to spend some time (and perhaps a little money) in making the skirt look presentable.

Rip the hem or facing at the lower edge, and brush and press the skirt nicely. Cut off the band. Put on the skirt, draw it up a trifle above the waistline, and arrange a new belt of the proper size around the outside, pinning it at the center back. Draw the skirt up until it fits loosely around the hips without wrinkles. Now pin the belt carefully around the natural waistline. There will be additional width at the waist which must be disposed of in some way. If the skirt is gored with inverted plaits at the back, take each gore seam in a trifle and change the plaits at the back, making them deeper. If the gored skirt has a habit back, enough fulness may be thrown to the back to make two shallow inverted plaits. In this case the plaits should be stitched down flat as far as the hips, because they have not depth enough to hang freely. When a circular skirt is raised in this manner it is sometimes necessary to take up a small dart at each side. Plaited skirts that are raised to give additional width around the hips may be easily fitted at the waist by lapping each plait just a trifle.

When the skirt has been raised and fitted, make it even at the bottom, clearing the ground from seven to ten inches. Measure this distance with a piece of cardboard, placing one edge on the floor and marking with tailors' chalk where the upper edge comes. Cut it off carefully by the chalk markings, and finish the edge of the skirt with a band of contrasting material just the width of the cardboard.

No. 1035—Double-Breasted Plaited Shirt Waist
Sizes 32, 34, 36 and 38 inch bust measures

No. 1036—Four-Gored Walking Skirt
Sizes 22, 24, 26 and 28 inch waist measures



How the Old Skirt Looks After It Has Been Remodeled by Drawing It Up at the Waistline and Adding a Band at the Bottom

A Page of Practical Fashions

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Full descriptions and directions are sent with each pattern as to the number of yards of material required. The number and the names of the different pieces in the pattern are given, and how to cut and fit and put the garment together is all carefully explained. On each pattern envelope is a picture of the garment, which is also a help in putting it together.

When ordering patterns be sure to comply with the following directions: For ladies' waists give bust measure in inches; for skirt pattern give waist measure in inches; for misses and children give the age. To get the bust measure, put a tape measure all the way around the body, over the dress, close under the arms. Order patterns by their numbers. Satisfaction guaranteed or money refunded.

Write for Our Pattern Catalogue

Our pattern catalogue is a big, illustrated fashion magazine in itself. It contains designs for Miss Gould's latest Paris and London fashions, and page after page of simple practical designs. It tells how to dress the baby, what style of clothes to make for your young daughter, and gives you many helpful hints about your own wardrobe, too. We will send it to you for four cents in stamps. Address: Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

No. 1084—Tucked Shirt Waist—Double-Breasted Effect
Sizes 34, 36, 38 and 40 inch bust measures

No. 1085—Plaited Skirt With or Without Yoke
Sizes 24, 26, 28 and 30 inch waist measures

FOR a simple shirt-waist suit made of linen suiting, madras or cotton cheviot, this design will be found most satisfactory. The eight-gored skirt with its yoke gives the slender-hip effect so fashionable nowadays.

No. 1038—Skeleton Jumper Dress (With Shirt Waist)
Sizes 6, 8, 10 and 12 years

No. 1086—Plain Housework Dress
Sizes 32, 34, 36, 38 and 40 inch bust measures

No. 1089—Waist With Mousquetaire Sleeves
Sizes 34, 36, 38 and 40 inch bust measures

THOUGH the housework dress here pictured is extremely plain, yet it is cut on good lines and has a smart style. The five-gored skirt hangs well and is short enough to freely escape the ground all the way around. Gingham in a quiet design is an extremely good material for a dress of this sort. All the old reliable materials, such as gallatea, cotton cheviot, madras and linen, will also proof satisfactory, every woman knowing their good wearing qualities.

Though this is a housework dress, yet the woman who has a good figure and cares for simple clothes need not necessarily wear this dress only when she is working about the house. The model would look extremely well developed in a striped taffeta or bordered foulard, and would then look fashionable for almost any home occasion.

No. 680—Kimono With Yoke
Cut in one size only

No. 908—Tucked Shirt Waist With Applied Yoke
Sizes 34, 36, 38 and 40 inch bust measures

No. 909—Thirteen-Gored Skirt
Sizes 24, 26, 28 and 30 inch waist measures

THE greater number of the new spring fabrics show the stripe predominating. It is seen in the new cottons and linens, and it is also shown in the wool fabrics, such as suitings and the serges, both in self and contrasting colors. The design here illustrated would look well developed in silk, as well as wool or cotton.

No. 965—One-Piece Guimpe Dress Buttoned on Shoulders
Sizes 6, 8 and 10 years

No. 1065—Combination Corset Cover and Drawers
Pattern cut for 34, 36, 38, 40 and 42 inch bust measures. Pattern includes both corset cover and drawers. Quantity of material required for medium size, or 38 inch bust, five and one half yards of twenty-two-inch material, or three and three fourths yards of thirty-six-inch material

The Department For Our Young People

Lizzie and Her Elk-Tooth Dress

BY ANNA B. REDDICK

PERHAPS nothing has created more sensation among the Cheyenne Indians during the past few years than the death of Lizzie Pendleton and the disappearance of the dress in which she was buried.

Lizzie was an educated Indian girl who had been schooled at Darlington, Oklahoma Territory. She was a favorite among the Indians and was well thought of by her white friends, who were always glad, even anxious, to talk with her.

Two years ago, when typhoid fever was playing havoc with our red friends, Lizzie was one of its victims. Now, every one knows that if an Indian is sick of a disease that requires careful nursing and skilful medical attention, the chances for recovery are decidedly in the minority.

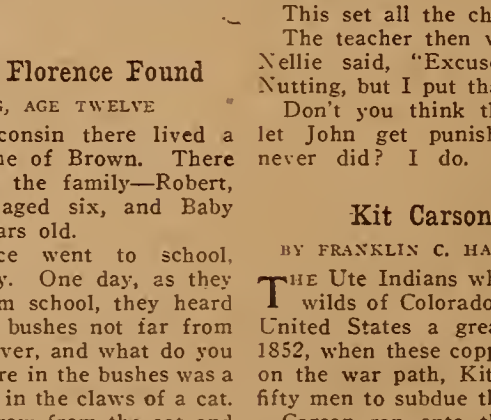
The incantations of the Medicine Man in this case proved fruitless, and after a short illness she died, and was buried according to the customs of her ancestors.

With her were buried her shawls and her pocketbook containing about ten dollars in money. Her burial robe was an elk-tooth dress, the finest that people of the Southwest had ever seen.

The garment was trimmed with one thousand elk teeth brought from the Dakotas and Montana. The Order of Elks being anxious to purchase this, its members had offered her from twenty-five to thirty-five dollars for every tooth she would sell them; but even this fabulous sum was not sufficient to induce her to part with it.

A few days after her death the report became current that the grave had been robbed and the dress stolen. For a time no one believed this, as the Indians are a great people to dream about their dead. Investigation showed that rumor was true, and a reward was offered for the recovery.

The thieves in their haste had left a spade with a man's initials cut on the handle. This, coupled with the fact that only one white man knew of the burial of the dress, led to its discovery and the implication of four white men. The dress had been destroyed, but part of the teeth were found in Oklahoma, some in Iowa, and still others were traced and recovered in Chicago and New York City.



LIZZIE PENDLETON

Mary's Disobedience

BY HAZEL MOORE, AGE FIFTEEN

MARY came home from school later than she had been getting home, for she had stopped at the pond with Maze.

"Mary, why is it you can never get home when Fred does, any more?" asked her mother.

"It's not late, mama."

"Well, but Fred has been home for a half hour. Where were you, Mary?"

"I was just on the ice a little bit, mama."

"And you have been taking medicine for a week for your cold! You will get down sick. I've told you so often to stay off the ice."

Mary did not say anything, but ran and put her arms around her mother's neck. "Well, Maze has a new pair of skates, and I wanted to see her skate."

Mary had just gotten over one bad cold and started to school when this happened.

In the evening, when her father came home from work, she was sitting by the fire reading. Her face was red. She was so restless that her father took notice of her face being so red.

"Mary, what makes your face so red?" he asked.

"Oh, nothing, I guess."

He put his hand on her forehead. "Why, Mary, you have got fever. I thought you had gotten over your sickness."

Her mother soon told him where Mary had been and how late she had gotten home.

That night her fever rose and her throat got sore. She was not able to go to school the next day, nor for many days, for she had lung fever.

One day, when she was able to sit up in a chair, she said to her mother:

"I'll never disobey you again, mama, not for Maze's new skates or anything, for I suffered so much for just a half hour of fun."

A Trip to the Moon

BY MARY E. SMITH, AGE FOURTEEN

ABOUT five years ago I took a trip to the moon, and there, strange to say, I saw many school friends and others. They were on the journey I was engaged in.

After about two hours of rest I started out to see the sights, and after walking two or three rods I came upon a sign bearing the following: "If you turn to the right and walk five steps, and then to the left, you will find something."

So on I went just to see, and found a queer-looking vehicle standing there, with three or four of my friends comfortably seated in it. So I took up the same position.

In a few minutes the vehicle started—I did not know where—but on and on it went, through the trees and bushes. Suddenly the vehicle stopped, and we were told to get out and also ordered to wait right there for a few minutes.

After a short lapse of time a rudely made air ship came around a corner, and when it was opposite us it stopped and we got into it. When we were seated we gave the signal to the aeronaut to draw up the anchor and start, so off we started at full speed, with a jump and a bound.

At last we came to a large rock with a wooden door standing up against it. The air ship stopped, and the aeronaut got down and thumped on the door, which opened at once. We went in, and all of a sudden it became all glittering and sparkling, like diamonds. We went through it in the doors and windows (of course, we were in the air ship).

We viewed the curiosities with great amazement, and some of us tried to get some and take back with us, but when we got them into our hands and started to put them into our pockets they would disappear and we knew not where.

In about two hours some one, while investigating the wonders, was so amazed that she gave a whistle of joy, and immediately a strange woman appeared in a glass jar. She was dressed in costly robes of rubies, diamonds, pearls and velvet. She thumped on the lid, and it opened, and out she jumped and danced and sang several pretty songs.

Pretty soon we started for the air ship, but when we got to where we left it, it was nowhere to be found.

After hunting for a few hours we became tired and lay down to sleep. In a few minutes we were sleeping soundly, and when we were awakened by a terrible noise we found that we were in our own homes, but how we got there we do not know to this day.

What Robert and Florence Found

BY PEARL YOUNG, AGE TWELVE

ON A farm in Wisconsin there lived a family by the name of Brown. There were three children in the family—Robert, aged eight, Florence, aged six, and Baby Alice, who was two years old.

Robert and Florence went to school, which was a mile away. One day, as they were coming home from school, they heard a rustle in a clump of bushes not far from the road. They went over, and what do you think they found? There in the bushes was a tiny sparrow, held tight in the claws of a cat.

Robert took the sparrow from the cat and gave it to Florence; he took the cat, and they went home. When they arrived there their father made a cage for the sparrow, and the children kept it and fed it and it became quite tame. One morning, when they went out to the barn, they saw in the hay six little kittens. They ran in and told their father, and he said they could keep two. The others they gave to their little friends.

The Truthfulness of Nellie

BY SOPHRONA DUVALL, AGE FIFTEEN

THE little girl of whom I am going to write was a little schoolgirl. She was very different from most school children, for she didn't believe in telling stories to get out of trouble. Nellie was very mischievous, however, and was often in trouble. Most always she escaped punishment because she looked so cute and said such quaint things.

One day she was sitting in school dreaming, and not thinking of her lessons, when she saw a pin on the floor. She picked it up and looked at it. Then she bent it and put it in the seat beside her. Another little girl and Nellie sat together. They were chums, but often played tricks on one another. Nellie's chum was Jane.

Jane was at her class at this time. When she was excused and came to her seat, she sat down on the pin. She was very angry, and said to a little cripple boy behind her, "John, you put that pin in there, and I am going to tell the teacher on you." She never liked the little boy, because he was petted more than she was, I suppose.

John said, "I didn't put the pin there."

Jane held up her hand, and said, "Mr. Nutting, John put a pin in my seat, and I sat down on it."

This set all the children laughing.

The teacher then went to scold John, but Nellie said, "Excuse my impudence, Mr. Nutting, but I put that pin in the seat."

Don't you think that was better than to let John get punished for something he never did? I do.

Kit Carson's Battlefield

BY FRANKLIN C. HAMILTON, AGE SIXTEEN

THE Ute Indians who inhabit the mountain wilds of Colorado have always given the United States a great deal of trouble. In 1852, when these copper-colored rascals went on the war path, Kit Carson was sent with fifty men to subdue them.

Carson ran onto the Utes in the Muddy Cañon so unexpectedly that he hardly had time to get into fighting order before the Utes were pumping arrows. When Carson did get under cover, however, he and his men gave the Utes a charge which stretched thirty of their dusky warriors out upon the grass. Armando Sanchez, who was Carson's right-hand man, killed the Ute chief at the first volley.

This was a severe blow to the Utes, for the chief was a good leader and a brave man. But as the Utes were fully three hundred strong, they decided to give the whites a good whipping and avenge their loss, so they advanced from behind the rocks, where they had been hiding, and mounted their horses, which were close at hand. Carson's band also came from their shelter, mounted on their horses, and fired a volley at the Utes which made them break for the plains, Carson's men close in pursuit.

When the open was reached the Utes began to get ugly. They gave the whites shower after shower of arrows, which did little harm, but was very disagreeable. After exchanging several volleys, the Utes broke into a run and made for the east with Carsons men hard after them. The fight lasted about three hours, and was fought over seven miles of ground. Many Utes fell and a few were captured alive. They fought bravely, for they were brave and cunning warriors, but the white men had guns against arrows, and large and fast horses against buffalo ponies. Carson lost four men and the Utes lost at least one hundred.

The battle began in the foot hills near the head waters of the Muddy Creek. The whites gave up the chase near the old Santa Fé trail, because the prisoners became unruly.

The Utes made peace a few months after. Much of the old battlefield is now used for grazing purposes. It is thirty miles southwest of Pueblo, Colorado, but it is visited very little because it is so remote from any line of travel.

HIS NEXT BEST FRIEND IN HARNESS

The Two Pet Squirrels

BY FLOY WILEY, AGE ELEVEN

ONCE there were two red squirrels that would come to our house for food on cold winter days. I named them Frisky and Bunny, but I doubt if they ever knew it.

When I saw them coming I would run and get a handful of beechnuts which I had gathered in the autumn, and put them on the veranda. The squirrels would come and take one in their mouths, then run up on the veranda railing and look in the window at us as they ate the nuts.

They came every winter, but I seldom saw them in the summer, when food was plentiful.

The Puzzler

Below will be found some old-time as well as some new riddles that have been sent to us by our young readers.

1. What grows bigger as you contract?
2. What is the first thing you would do if you fell in the Red Sea?
3. What does a new hat become?
4. What hen lays the longest?
5. What is it that runs and never flies, is wingless and legless and has four eyes?
6. What is the difference between a school teacher and a train conductor?
7. When is a nose not a nose?
8. Why is a dog's tail a great novelty?
9. Why is the letter K like a pig's tail?
10. How does a goose resemble a cow's tail?
11. Where is happiness always to be found?
12. How do bees dispose of their honey?
13. What fruit is like an old monkey?
14. Why does a pretty girl resemble a hinge?
15. Why is a ten-cent piece like a cow?
16. Why is a falling star like a fog?
17. What is the difference between a school teacher and a postage stamp?
18. What trade is like the sun?
19. Why is an old maid like a wilted apple?
20. What runs all day and sleeps under its bed at night?
21. On what day do the women talk the least?
22. What stands in its bed with its heart in its head?
23. What is it that is neither fish, flesh nor bone, and yet has four fingers?

ANSWERS TO PUZZLES IN THE FEBRUARY 10TH ISSUE

Hidden words: Hens, arm, car, age, bug, doe, tin, gin, rough, evil, ages, sup, luck, sand, hip, hake, how, ass, ton, rest, wit, noon, ear, loo, tar, man, slip, hat, heir, urn, law, ape, rye, hash, neck, tie.

Riddles: 1. His equal. 2. The tree. 3. The outside. 4. Ashes. 5. Only ten ears of corn, for he brings out two ears on his head every time he comes out. 6. When you and I are one. 7. Because the soldier faces the powder and the girl powders her face. 8. Because the baby has to be cradled and then thrashed. 9. An umbrella. 10. Sunday. All the rest are (weak) week days. 11. Make apple sauce. 12. Wheelbarrow.

Wit and Humor

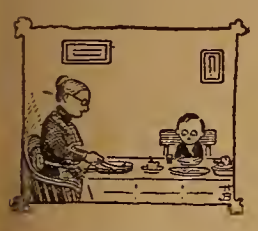
Going Some

It was customary during the busy season of a thriving Western railway to run several trains in sections, but all on the schedule time of the first train. The great trouble of this method of running trains was the numerous reports to division superintendents that the trains thus run were exceeding the speed limit.

One division superintendent, becoming exasperated at the continued reports of train men running their trains too fast, concluded to see for himself as to the truth of these reports. Taking a companion with him, he went out to a small town on his line and stationed himself some little distance from the town.

He soon heard the whistle of the first section, and in a few seconds a long freight went tearing past running at least a mile a minute.

"I will discharge that man," said the superintendent, making a note in his book.



SCIENTIFIC ITEM

" Grandma, do your 'specs' magnify very much?"

"Yes, dear. Why?"

"Well, would you mind takin' 'em off while you're cuttin' my piece of pumpkin pie?"

Soon the second section went past, swiftly following the first.

The superintendent made another note.

Just then the third section went flying past, with cars swaying and creaking and the engine dangerously rocking as it tore on its way.

"By thunder!" exclaimed the superintendent excitedly to his companion, "if that first man don't keep on a-going I *will* fire him!" EUGENE W. OWEN.

◈

A Woman's Reason

ELLA—"Whatever could have persuaded Maud to marry young Jimpson? Was she in love with him?"

STELLA—"Good gracious, no! She married him because she thought Ada wanted him."

HE DIDN'T LOOK BEHIND HIM

Farmer—"Come, Dobbin, trot along a little! You're gettin' so weak that you can hardly pull an ordinary sleigh."

FIRST OFFICE BOY—"I told the governor to look at the dark circles under my eyes and see if I didn't need a half day off."

SECOND OFFICE BOY—"What did he say?"

FIRST OFFICE BOY—"He said I needed a half bar of soap."

◈

An Up-to-date View

"Have you seen the latest thing?" asked his friend, who had come along after he had been standing forty-five minutes on a subway platform.

"Yes," he said; "I'm waiting for it now. I'm married to it."—Judge.

A LONG WAIT

Uncle—"Come, Percy, let's go to the house."

Percy (on first visit to country)—"Wait just a minute, Uncle John. I want to see the end of this little brook go by."

Presence of Mind

"Did yer git any damages for bein' in that there bus accident, Bill?"

"What 'o! Twenty quid for me an' ten for the missus."

"The missus! Wot! Was she 'urt?"

A large expansive grin followed.

"I 'ad the presence o' mind to fetch 'er one over the 'ead 'fore we was rescood."

◈

Evidence

"The evidence shows, Mrs. Mulcohey, that you threw a stone at the constable."

"It shows more than that, Yer Honor. It shows that Oi hit him."

◈

JIM—"Gruet is terribly absent minded."

JACK—"I should say so. I've known him to telephone to his office and ask if he was in."

◈

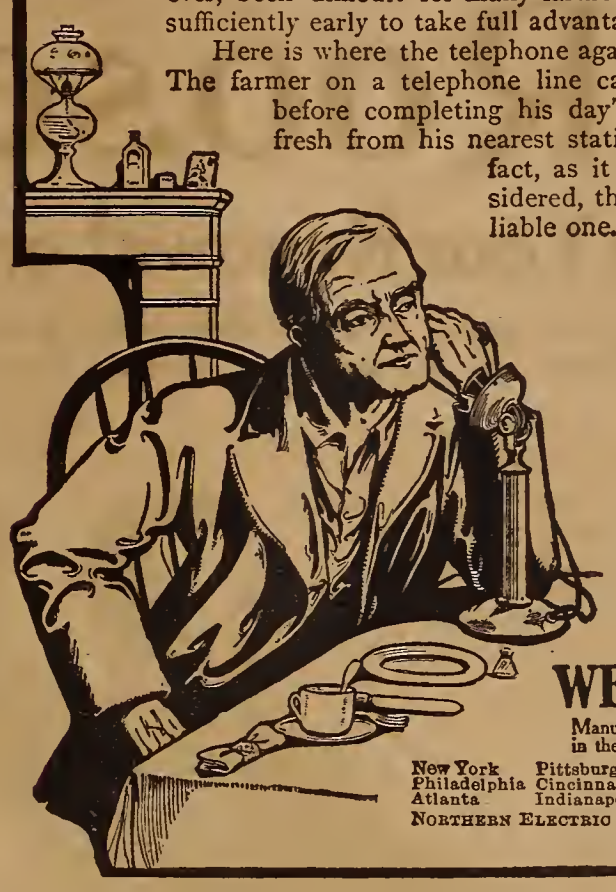
"Did the tailor take your measure?"

"Yes, unfortunately—he wants cash!"

Weather Forecasts by Telephone

Since agriculture is largely ruled by the weather, the importance to the farmer of the Government weather forecasts can hardly be overestimated. It has, however, been difficult for many farmers to get the forecasts from the stations sufficiently early to take full advantage of their information.

Here is where the telephone again proves its special value to the farmers The farmer on a telephone line can get, while at his breakfast table and before completing his day's plans, the official weather predictions fresh from his nearest station. But here again is emphasized the fact, as it is whenever the telephone is rightly considered, that the farmer's telephone must be a reliable one. *Buy and use only*



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Will run your wood saw, cutting 1½ cords an hour; your grinding mill; your corn sheller; your pump; cream separator, your churn, etc., etc.
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Runabout, Surrey, Carriage or any style of light pleasure vehicle that you want, to your order, just as you want it, and send it to you on THIRTY DAYS' FREE TRIAL, and guarantee it TWO YEARS. You try one of our vehicles 30 days. If you are not satisfied, we take it back and refund all your money. We have been selling our vehicles that way for seven years—we know that they will do just what we claim for them; this is why we send them out on such liberal terms. Our FREE 192-page catalog shows all of our up-to-date Automobile Seat Runabouts, Top Buggies made in two-in-one combinations, Surreys, Carriages, Spring Wagons and Harness, and tells all about our liberal selling plan and our strong guarantee. We operate two big plants, making nothing but carriages and harness—one at Cincinnati, and the other at Columbus, Ohio. The demand for our goods in 1907 made it necessary to double our manufacturing capacity. Write for our big, FREE catalog today. Send all mail to the Home office, Columbus, Ohio.

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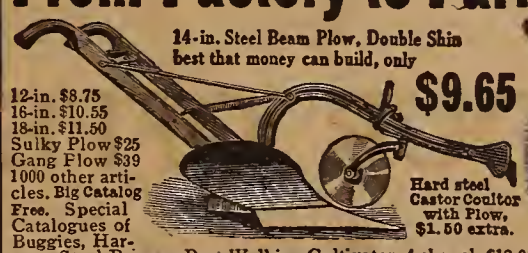

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Last Call

For Pony Contestants

The contest closes March 1st. Your orders must bear the March 1st postmark—no later—to count toward a pony or a piano. This is your very last chance to be a winner in the greatest and most liberal Pony Contest ever conducted. Make every minute count and don't give up!

I am glad to tell all the pony contestants about the winner of the Christmas piano. He is Howard G. Laidlaw, of Walton, New York. Master Laidlaw says that he put in every moment he could and hustled like wild-fire to win, but even then he wasn't much ahead of lots of other contestants. The race was so hotly contested that I didn't know till the very last moment who the winner was. So many others have almost as many points as Master Laidlaw that he isn't by any means sure of getting a pony, even though there are ten of them. Lots of others have just as good a chance as he.

Honor Roll

Clark Llewellyn, Colorado.
Jessie Ivey, Florida.
Chester Burrows, Illinois.
Viola Schmitt, Illinois.
Lynn Peters, Illinois.
Clarence Shepler, Illinois.
Kenneth Ayres, Iowa.
Myrle Cheney, Iowa.
Hazel Stirm, Iowa.
Harold Stewart, Kansas.
Risk Johnson, Kentucky.
Maggie Morgan, Kentucky.
Faye Worthley, Maine.
Wm. Fisher, Michigan.
Mabie A. George, Michigan.
Arvah Leone Hand, Michigan.
Minnie McClain, Michigan.
Ruth Niblack, Michigan.
Ruth Larrabee, Minnesota.
Robert Hall, Missouri.
Lawrence Miller, Nebraska.
Ruby Chamberlain, New Hampshire.
Charlotte Bellman, New York.
Edna A. Colling, New York.
Jane C. Glenn, New York.
Shober Jackson, North Carolina.
Mary Cramer, Ohio.
Park Crocker, Ohio.
Harold Ketcham, Ohio.
Frankie Kline, Ohio.
Mabel Robinson, Ohio.
Herman Shockey, Ohio.
Harvey Snyder, Ohio.
Edwin Titus, Ohio.
Lester Snider, Oregon.
Jay E. Catlin, Pennsylvania.
Fred W. Hosler, Pennsylvania.
Mabel King, Pennsylvania.
Edw. E. Roderick, Pennsylvania.
Inez Sterrett, Pennsylvania.
Pansy Brown, Rhode Island.
Susie Harley, South Carolina.
Elven Richard, Texas.
A. S. Darden, Virginia.
J. Raymond Smith, Virginia.
Ida Olson, Washington.
Mabel Riegel, Washington.

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Before the Prices Change

On March 31st the subscription prices of FARM AND FIRESIDE will be revised. This is not a decision desired by us, but something that has been forced upon us by the greatly increased cost of labor, paper and everything that goes into a good farm paper like FARM AND FIRESIDE.

For over two years, while other farm papers have been increasing their prices, we have been putting this off for the benefit of our readers, but now, in justice to ourselves, we are at last compelled to face the problem.

We will let you renew or subscribe right away—not for one year, but for three or seven years. If you do this, you will get FARM AND FIRESIDE at the present low prices for several years to come, while others are paying the increased price. Don't delay! Even if you have renewed lately, renew again for more years still, and be sure of the low price.

To relieve the rush that would naturally come in March and to show you our appreciation for sending us your subscription promptly, we will send you a great ensemble picture containing 500 different photographs of President Roosevelt, if you will accept one of the offers at the bottom of this page **before March 15th.**

Your Greatest Opportunity

This is the greatest and most wonderful picture ever made and shows the President in 500 different and characteristic attitudes. It cost us nearly $1,000. There is no other picture like it anywhere on earth. No other like it can ever be made of President Roosevelt. It is the most wonderful picture in America of the greatest living American. The size is 13⅜ x 20½ inches printed on heavy coated stock, all ready to put up in your parlor or sitting-room.

Remember, this great picture is really 500 different photographs. It can be obtained nowhere else on earth because FARM AND FIRESIDE has the exclusive right to reproduce it. This great picture is so wonderful that five years from now it will be worth many dollars, and after President Roosevelt is out of public office, it will be almost priceless to your sons and grandsons; President Roosevelt has always been such a sturdy friend of the farmers, that we want a copy of this great picture to be in every American home—especially every FARM AND FIRESIDE home—so we make this offer:

How to Get Them

If you have already renewed your subscription for three or five years, you can get this great $1,000.00 Roosevelt Puzzle Photograph with 500 different pictures of the President by getting one new subscriber to FARM AND FIRESIDE before the price changes March 31st. And remember this: the number of new subscribers our friends send us before March 31st will have a lot to do with the future price of FARM AND FIRESIDE.

If you have not renewed, or if you have renewed for only one year, accept one of the three offers below. Then you will not only get this great picture, but you will also get FARM AND FIRESIDE at the present low price several years when others will be paying more. This great picture is given only with a renewal or for getting a new subscriber to FARM AND FIRESIDE.

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OFFER No. 3

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Accept one of these offers before the prices change! NOW is the time!

RUSH THIS ORDER BLANK

A Blue Mark

on page 3 shows that your subscription has expired or is about to expire. Renew it **NOW** by accepting one of these liberal offers.

FARM AND FIRESIDE,
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Determine to make a big leap forward during this leap year.

Before the wise farmer sells his hogs he gives them a weigh.

The farm produces many by-products that the world will buy.

A man should give his neighbors a fulfilment for every promise.

The farmer makes his mark in the world by first making it in the field.

The town people who buy milk and butter like the good, honest cow kind.

The hen that cannot be kept from scratching surely can be kept from flying.

Some men run in debt when they could get along just as well by merely walking in.

Some farmers show their wisdom in what they do, others in what they refrain from doing.

Some farmers have been known to sell their farms to get money, while others kept their farms and made the money.

The history of the poultry yard repeats itself—that is, the hens lay about the same number of eggs, and cackle about the same number of times each day.

The low price of hogs has been a good thing, after all, in that it has caused farmers over the country to kill more meat than usual. Too many farmers have been selling pork for six cents on foot and then buying the meanest part of it back in the shape of salted sides at eleven cents.

WILLIAM J. BURTSCHER.

STAYING AROUND HOME

I noticed an article in FARM AND FIRESIDE, entitled "Staying Around Home," by J. C. McAuliffe.

I am aware of the fact that there is a spirit of restlessness among the farming class. I spent last February in Texas, and found farmers selling good farms in good localities, and moving on west, simply because they could sell at a high price and buy at a low price.

That is a good reason for selling and buying, but for any one to be constantly changing, having no real cause for a change, excepting a spirit of restlessness, it is the height of folly.

I do not know in what part of the United States our friend lives, but I do know that our Southland offers opportunities for getting rich fast that are not to be found in any other section of country. Our climate is ideal, and the possibilities of our soil are yet unknown. In many instances, there were yields of one hundred barrels of radishes to the acre last spring, which sold for from eight to eighteen dollars a barrel. After the radishes were gathered, cotton was raised to the amount of a bale to the acre.

Alabama. J. T. MONCRIEF.

SEED CORN

Owing to much of the corn not fully maturing and the wet fall it is likely that it will be difficult for many farmers to get good seed corn for this spring's planting. Unless the seed corn is already selected and safely stored away it would be a good plan to look out early for the seed corn.

The seed should be secured in plenty of time to test it, in order to be sure that a high per cent of it will germinate. The testing should be done in plenty of time to secure and test other seed before planting time if the supply should prove to be lacking in vitality.

A good stand of corn from the first planting is necessary in order to grow a good crop. Replants do not usually make good ears of corn, since the first planting has the start of them and robs the younger corn of needed plant food and sunshine.

A. J. LEGG.

ALFALFA DOUBLES THE YIELD

Prof. S. B. Thompson, of London, England, after quoting the prediction of Sir William Crookes "that the number of bread eaters in the world in four years more will be 603,700,000, and that the acreage under cultivation for the production of food is not keeping pace with the increase of population," replies as follows: "In ten years we will be raising alfalfa in a five-year rotation, and we will then double the average yield of every acre without using a pound of fertilizer. The alfalfa will do it." W. M. K.

We want every loyal member of the FARM AND FIRESIDE family to send us two new subscribers on "FARM AND FIRESIDE Day," March 31st. Read all about it on page 12, and then we are sure you will want to help.

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Please send me, without obligation on my part, absolutely free, full particulars regarding your free trial offer of Star Talking Machines

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Our patent oven thermometer makes baking and roasting easy.

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This is the most wonderful PRIZE CONTEST you ever heard of and everybody may compete. No entrance fee. No trashy merchandise to sell. You don't have to spend a cent. But you must write at once. A postal will do.

We positively give this complete driving outfit, of pony, harness, and cart, to the fortunate winner of the prize. The pony is a sturdy young animal, and the young folks will rave over him with his handsomely mounted harness, hitched to his substantial cart. With two or three apple faced youngsters as passengers, he makes a picture that will gladden the hearts of old and young alike. He is docile also, but not lazy, as he has been well broken into harness by an experienced trainer, and there need be no fear for the young folks to drive him alone.

The pony and cart is especially for the young, but for their elders we have equally valuable prizes, including a **High Class, Full Toned, Upright Piano,** an **Edison Phonograph,** a **Bag of $100.00 in Gold,** and other desirable articles, aggregating altogether ***200 Different Prizes.***

HOW CAN YOU GET ONE OR MORE OF THE 200 PRIZES?

EASY! LISTEN TO OUR EASY PLAN—The remarkable thing will not be that you will fail to get one, but that you will not fail to get one. This is entirely different to any other Prize Contest you ever heard of, or investigated. You do not take any chances whatever, because if you do not win a prize, you are bound to be liberally rewarded by complying with the simple conditions of our contest, and the conditions are based on the grand principles of Co-operation. It is only by co-operation we are able to make our generous, magnificent offer, and co-operation is bound to bring both you and ourselves success. Space in this paper is too expensive to go into all the details of our contest, so we will ask you to write us a postal, Now—Today, and by return mail we will send you, all charges prepaid, complete detailed information, with description and pictures of the prizes, and we will explain how our system of Co-Operation is sure to bring a speedy reward. Address plainly—

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Winters are mild in the Pan Handle

Winters down in the Pan Handle country of Northern Texas, Western Oklahoma and Eastern New Mexico wouldn't seem like winters to you farmers up north. It's just like Fall and Spring down there all Winter. Bright, sunshiny weather, just cold enough to make a man feel fine; just warm enough so's he can work outdoors with comfort.

Stop and calculate what this means to the Pan Handle farmer. It means that he's got twelve months every year that he can make money in. It means that he doesn't have to feed his stock till they eat their heads clean off. It means that he doesn't have to spend his good dollars on warm shelter for his stock. Not by a jugful! He's got a snap, alongside o'you fellows. Those Pan Handle farmers came from up north. Sold out their small farms and moved down to the Pan Handle and bought fine land at $10 to $15 an acre. They started in to raise corn, wheat and oats just like they used to up north. They didn't calculate on getting big crops--didn't have to, land was so cheap.

He plows in January and February.

When they got the crops all made they were the biggest fooled lot of fellows you ever saw: forty bushels of corn, twenty to thirty bushels of wheat to an acre, three and four cuttings of alfalfa, two and a half tons to a cutting. No wonder they were surprised.

Wouldn't you like to swap a long, dreary winter up north for a bright, sunny winter in the Pan Handle? Wouldn't you like to buy land at $10 to $15 an acre, good chocolate loam, 4 to 8 feet thick, with a clay sub-soil and plenty of water?

Why not go down there for a few days and look around? It will do you good and won't cost much—very low Homeseekers' fares are in effect each first and third Tuesday of each month to all points in the Pan Handle. Make the trip on the Rock Island-Frisco lines; they have four routes to the Pan Handle. Each one goes through a different part of the country.

I have got a book about Texas that's mighty interesting reading! Another about Oklahoma! Still another about New Mexico! They will tell you a lot you want to know about the Pan Handle Country before you go down there. Do you want one for nothing?

The Rock Island-Frisco Lines have no land for sale, and are only interested in getting good, energetic settlers for the desirable, but unoccupied, lands along their lines.

I have chosen several sections where conditions are especially favorable for new settlers, and I am advertising these sections. If you would prefer some other section than the Pan Handle country look for my advertisements in other issues of this paper, or write me for literature about the section you are most interested in.

Rock Island — FRISCO

JOHN SEBASTIAN
Pass. Traffic Mgr.
1522 La Salle Station
Chicago, Ill., or
1522 Frisco Bldg.
St. Louis, Mo.

FARM JINGLES

Lives of layers all remind us
We can make ours do as well,
And cackling, leave behind them
Eggs to eat and sell.

A farmer without a farm paper
Is like an egg without a salt shaker.

The time we spend in building
Castles in the air
Should be used in making
Our earthly home more fair.

My chicken, 'tis of thee,
Bird of laying capacity,
Of thee I sing!
I love thy eggs, I do;
Meat, feathers and cackle, too.

Hitch your wagon to a star,
And without any braggin'
Let the world know
That you are in the wagon.

W. J. B.

POTATO COVERER

Having read what Mr. Earl J. Nye has to say about a potato coverer that he has made, I will tell the readers of FARM AND FIRESIDE of a much better and handier one, requiring only one horse and man to operate it. I have found that a double-shovel plow makes a good potato coverer, going twice in a row same as when plowing corn, and better still, take a two-horse corn plow or cultivator and go once in a row, letting your team walk astride of the row.

With either of these implements, which are used on every farm, more and better work can be accomplished and the ground left in the best condition for growing a crop of potatoes. H. G. LEHMANN.

FAKE STOCK COMPANIES

I am asked what I think of three different mining propositions. I had thought these mine promoters had gone out of business, but there seems to be still some on tap. I said to a man who has sunk over three thousand dollars in one of these propositions that I had three inquiries about investing in mines; what would he advise me to say in reply. His remarks would, I fear, melt the type. All of these propositions are in one class, and it will pay anybody to steer clear of that class. I would not advise anybody to put a penny in any gold, silver, copper, oil, rubber or any other proposition of that character. There is not one chance in a hundred of ever getting your money back, to say nothing about dividends.

I have received printed matter that was very attractive from the manufacturers of incubators and other poultry machinery, book and paper publishing syndicates and corporations, inviting me to come in on the ground floor and get rich, but I always respectfully declined on the ground that great riches might make me vain, and I wouldn't like to be vain.

But here is a new wrinkle. A bunch of chaps (it may be only one) are on the point of building a great poultry plant and incubator factory, and they want me for a silent partner. The "plant" is to be run for advertising purposes and the factory for wealth. They say in their printed matter that if they can show several thousand chickens in the plant growing into dollar broilers people will fall over each other to buy the incubators and do likewise. They declare this is being done in several places. They casually admit that there may be very little profit in the "plant," but it will be made good in the factory. The proposition is immense, and is set forth in colors that are extremely vivid.

The "private prospectus" states that it costs only two or three dollars to make an incubator that will quickly sell for fifteen, and by judicious advertising thirty or forty thousand can be sold each year, because every farmer and villager in the United States is wanting one to a dozen of such fine incubators and accessories as they propose to put out, and will buy them promptly and for cash. According to this "private prospectus," I would have little to do but cut coupons and draw dividends. I reckon I ought to put in my thousand and get in on the ground floor before daylight; but the same old fear steals over me—I might become excessively rich and get gay and vain, and I wouldn't like to. Possibly some of my readers have received this same sort of literature. If so, I would advise them to quietly pass it up. This proposition is a little too good and beautiful to be long lived. The promoters would get the doubloons and the stockholders—the stock. FRED GRUNDY.

Thousands of our good friends are going to help us make "FARM AND FIRESIDE Day" the biggest day we have ever had for subscriptions. We are counting on *you* to help, too. Show us that you appreciate our efforts to give you the best farm paper in the country, by sending us two new subscribers March 31st.

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OUR BABY CARRIAGE & GO-CART CATALOGUE—No 62 shows the most remarkable values ever offered. Send us a postal card for Catalogue you want. They are free.

We will ship you, at once, any article selected and you can pay the bill later on easy credit terms to suit your salary or income. Thus you will enjoy the full use of the home furnishings while you are paying for them. Our open account easy credit is free to everyone everywhere. We make no extra charge for it. No interest to pay, and we positively guarantee to sell you "Goods of Quality" from 30 to 50 per cent. less than your local dealer.

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Our Positive Guarantee: We will ship you any article or outfit on approval. If it is not perfectly satisfactory you can return the goods to us at once and we will refund any payment and pay transportation charges both ways.

SEND US $1 Cash and we will ship you this beautiful tufted, solid oak Easy Rocker upholstered with genuine Black Sylvan Leather—the nearest approach to real leather. Has broad, full opera seat, diamond tufted and rosette back, heavy spindles, richly carved front, prettily ruffled edges. Price $5.75

A High Grade Rocker at a Bargain Price.

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Farm and Home is the best and most practical farm and family semi-monthly published, a recognized leader in the farming world; its contributors are recognized authorities and its editors practical men who know what farmers need. The three great editions—Eastern, Western and Southern—cover the entire country, each editorially adapted to its respective section. Each issue goes to more than 2,000,000 readers in all parts of the world, and a year's numbers (24 issues), a volume of over 600 pages, *cost only 50 cents.* Sample Free on request.

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To introduce Farm and Home into thousands of homes where it is not now taken, we will send you the paper until November, 1908, *for only 20 cents* (two dimes or ten 2-cent stamps). Further, if you send us at the *same time* the name of one other person to whom we can send a free sample of Farm and Home, we will send *you* postpaid the beautiful work of art here illustrated *without other cost.*

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Marquette Bldg. FARM AND HOME Chicago, Ill.

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BOYS LISTEN! How would you like to own a WATCH? A real watch, that will keep time just like father's does.

Well, "Uncle Solon," he is the kind man who publishes the AMERICAN FARMER over at Indianapolis. He says that a boy never will be a man till he owns a watch. And so Uncle Solon wants to give every real, live, active boy, that isn't a "sissy" boy,

A Genuine Watch WITHOUT COST

Yes sir, given without a penny's cost. Uncle Solon loves boys. He has three of his own, and each one has a gold watch; and his boys are so happy that this makes him happy too. And now he wants to make you happy also.

You Don't Pay a Cent For The Watch!

You don't have to sell cheap jewelry or medicine, or anything like that. Uncle Solon only wants you to do him a favor, in the doing of which you are fitting yourself for becoming a wide-awake, successful man. If you want a watch that keeps good time, all you have to do is to get seven of your friends to subscribe for the AMERICAN FARMER at 40 cents a year. Think of it; you only have to get seven of your friends or acquaintances to take the AMERICAN FARMER for a year and send us the money—$2.80—and in a few days you will get a watch that is recommended to us to keep good time, and one that will please you immensely. It's a dandy!

Now, if you fail to get seven yearly subscribers, at 40 cents each, after an honest effort, you may keep half of all the money you have collected, and send the rest to us, so that you get well paid for your work anyhow. After you receive the watch and are not satisfied with it, if you send it back at once without wearing it, we will send you $1.40 in cash for the work you have done.

Now, Boys, Stir Your Stumps---Get a Move on You---"Hustle,"

As Uncle Solon says, and gee, but you will be happy and proud. And how all the boys you know will envy you and wish they could sport a genuine watch, too. Father or Mother or your big Brother, if you have one, might help you if you cannot do the work alone; but with pluck there's hardly a boy that cannot win out and get a watch, if he will only take a copy of the AMERICAN FARMER and show what a splendid paper it is. Why, boys, the man who wouldn't help you to get this watch, especially when he is getting the value of his money in a whole year's subscription to the best family farm paper in America, is an old fogy and is such a fossil that he has forgotten that he ever was a boy himself.

SPECIAL GOLD WATCH OFFER!

Any person, boy or girl, man or woman, that will send us 20 yearly subscribers to the AMERICAN FARMER, at 40 cents each ($8.00), will receive a beautiful watch, with 10-year guaranteed, gold-filled case, and represented by the manufacturer to be a splendid time piece. If an honest attempt to get 20 subscribers is made and proves a failure, one-half the money obtained may be kept out for your services. If you do not raise enough money to entitle you to the watch, and want the watch right away, send in what money you have collected and enough more to make up the required amount and the watch will be sent at once. Then you may have all the time you want to raise the rest of the subscribers, even though that takes a whole year. YOU CAN'T LOSE. DO IT NOW. Sample copies will be sent free to canvass with. Write. Big money can be made by canvassers on cash basis. Address

UNCLE SOLON, American Farmer, INDIANAPOLIS, IND.

AN ILLUSTRATED FARM AND FAMILY JOURNAL

U. S. Department of Agriculture

FARM AND FIRESIDE

WESTERN EDITION

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Millets for Feed and Forage

Their Value When Used in Short Rotations and as a Catch Crop

Among the forage crops which are not well understood by farmers in general is millet. Millet has no place in a regular rotation of crops, but can be used as a catch crop to supplement pasture in a dry season or in case of failure of the hay crop or injury to the corn.

The millets, of which there are many varieties, are important as food both for men and beasts. In China, India and Japan great quantities of millet are grown, and in Japan some forty million bushels of millet are annually consumed for human food. In India from thirty-five million to forty million acres of millet are grown, and when we consider that on good soil millet yields from twenty-five to thirty-five and even forty bushels to the acre, the amount produced is, on the whole, enormous. China also produces vast quantities, so that the grain possesses qualities which make it of value. Its successful cultivation and uses should be better understood by farmers as a rule, for it can be made to do good service at a time when other crops fail.

PEARL MILLET

There are many varieties of millet proper, and there are one or two forage grasses called by the name of millet which are really not millets at all. Among these is the pearl millet, or Penicillaria, which some of our seedsmen have boomed so assiduously the last few years. This is a grass which grows to a height of from six to fifteen feet and has a very leafy stem. It is probably native to Africa, where immense quantities of its seed are produced for human consumption. When sown broadcast for forage the yields are enormous, amounting in three cuttings to forty tons of green forage or as high as sixteen tons of cured hay an acre. It must be sown at the rate of one half bushel of seed to the acre on very rich soils, well tilled, to kill weeds before the seed is sown. If sown for seed it should be sown in rows about three feet apart, and the plants from four to six inches apart in the row. When intended for hay it should be cut when beginning to bloom, as later the stems become very tough.

GROUPS OF MILLETS PROPER

Of the millets proper there are three distinct forms, or groups. There is the foxtail group, which includes the common and Hungarian millets; second, the barn-yard group, including the varieties resembling the common barn-yard grass; and the broom-corn millets. The foxtail millets are so called from their resemblance to and probable descent from the common green foxtail, or pigeon grass (Chaetochloa viridis). Any farmer who hears the name of pigeon grass will at once recognize this millet, which is one of our most common forms. This is the most important group of the millets in this country, and probably in the world. Many believe them to be native to China and Japan, where they are now grown in such vast quantities, and others believe the common green foxtail to be the parent.

While these millets are grown in China, Japan and India for human consumption, they are grown in the United States largely as a food for animals. The varieties known as common millet, German millet, Golden Wonder millet, Hungarian millet, Japanese millet, all belong to this group and have much the same general appearance, although the varieties differ in some minor points, like drought resistance, yield, etc. The common millet is the most extensively grown of any of this group.

The barn-yard millet is so called from the resemblance of the heads to the common barn-yard grass (Panicum crus-galli), of which it is undoubtedly a direct descendant.

The barn-yard millets, like the foxtail millets, are used in some portions of the world for human food. The heads are open like oats, except that the seeds are much smaller and very smooth and shining, while the seeds of the foxtail millets are corrugated crosswise of the seed. Where used for human food the seeds are ground and used as a mush or porridge.

BARN-YARD GRASS

The true barn-yard millets are grown most extensively in this country in distinction to the Japanese barn-yard millet and the Shoma and Sanwâ barn-yard millets of southern Asia. The barn-yard millets are not so drought resistant as the foxtail millets.

The broom-corn millets, so called from the broom-straw appearance of the flower stems, probably originated in Egypt or southern Asia, and have no wild counterpart in this country. While they produce heavier crops of larger seed than some of the other varieties, they have never become so popular in the United States as have the foxtail millets. The different varieties in this group are distinguished most largely by the color of the mature seed, which varies from white, through yellow, to red. The growing plant also varies from a light green to a reddish tinge to correspond with the color of the seed. The larger number of varieties of this group grown in the United States are white seeded.

FOXTAIL MILLET

BROOM-CORN MILLET

CULTURAL METHODS

While the different groups and varieties differ in appearance and origin as before noted, the culture necessary is practically the same for all.

The millets produce heavy crops, usually producing two or more crops under proper environment, and so make a heavy draft on both soil moisture and fertility. The soil upon which millet is sown should therefore be very rich and should have an abundance of moisture. Millet makes a splendid crop to help subdue virgin soil among the stumps. It draws its nourishment largely from the surface soil, and this part of the soil should be enriched by applications of well-rotted manure or commercial fertilizers where necessary.

The millets are very susceptible to cold, and should not be sown until all danger of frosts is over, usually about the first of June. Sown at this time they will mature by the middle of August. The broom-corn millets will mature in from seventy-five to eighty-five days, and the foxtail millets in from eighty-five to one hundred and ten days. The land on which millet is sown should be thoroughly tilled, to kill weeds, before sowing the seed, otherwise the weeds are apt to get the better of the millet. In case the weeds get too bad, the hay may be cut and the land plowed again.

Where grain or corn is destroyed by hail or insects the ground can be cleaned, disked, sown to millet, and a crop produced to supply the lack of other forage. Millet makes a good soiling crop, and by sowing at successive intervals will furnish green feed throughout the season. The seed may be sown broadcast or with a drill, and should be sown at the rate of from one half to three fourths of a bushel of foxtail or broom-corn millets, and from one fourth to one half bushel of barn-yard millet to the acre, depending on soil and moisture conditions. The richer the land, the less seed will be needed, as stooling will be more extensive. The seed should be put in rather shallow, preferably not over an inch deep, and lightly harrowed.

All millet meant for hay should be cut at the time it begins to bloom. If left longer than this the stems become woody and fibrous and the beards develop to a degree that spoils the palatability of the hay. Barn-yard millet is a little harder to cure than either foxtail or broom-corn millet. A good way is to allow the hay to lie in the swath until partially cured, then cock up and allow the curing to finish in the cock, the same as is customary with alfalfa.

Where millet is to be cut for seed it should be allowed to ripen, and may then be cut with a binder, the same as the cereals. The bundles may be placed two by two in long shocks, and thrashed from the shock when thoroughly dried. This saves the handling of stacking, wherein much seed is battered from the heads.

VALUE AS FOOD

The millets are valuable as food for dairy cattle, young stock and sheep, especially where used as a soiling crop to supplement pasture. Care must be used, however, in feeding the green foliage, as damage may be done by overfeeding. It is well, where stock are turned into millet as a pasture, or where the green forage is fed, to blunt the appetite by some other feed beforehand, as the extreme palatability of the green forage may easily induce to overeating.

Where the corn crop fails millet may be used as a silage crop with very excellent results. It is especially valuable in this connection on account of its short maturing period, whereby a crop can be obtained for silage even after the corn is destroyed by hail or insects.

The notion that the foxtail millets will prove injurious to stock is probably due to the fact that in some cases the grass was left too long before cutting, and became hard and indigestible. The beards also become stiff and harsh, and are

Don't Miss "Producing Good Cream," With Full Illustrations, in Our Next Issue

exceedingly hard to digest. In conjunction with other substances they may form balls in the stomach or irritate the stomach and intestines. All this may be avoided by cutting at the proper stage and feeding judiciously.

The actual feeding value of millet is about equal to that of timothy, although it is perhaps not so well relished by farm animals. As has been said before, it should not be fed alone, but in combination with other feeds. When green it has a tendency to act as a laxative, and if fed in too large quantities or continuously may prove injurious to stock.

On the contrary, over-ripe millet acts as a diuretic, and may also prove unhealthful, but cut at the right stage and properly cured these effects are so small as to do no harm, and may assist in keeping animals in a healthy condition. The barn-yard millets are perhaps superior to the broom-corn and foxtail millets as a forage, as they have more fat and crude protein and a greater digestibility.

The millets, therefore, can be made extremely useful, either as catch crops or as a part of a short rotation, by the thoughtful farmer, and should be more generally adopted. A. L. Stone.

RENEWING FERTILITY IN EXHAUSTED SOIL

A lady in Illinois has an old garden that has been planted to potatoes so many years that much of its fertility is exhausted, while the soil is badly infested with potato scab and thoroughly seeded to weeds. She desires to renew its fertility and make good garden soil of it again.

If she had begun on it last fall she could have gotten it into very fair shape for the coming season. All that would have been necessary was to plow the land just as deeply as a plow could be run, turning in a heavy coat of mixed stable and poultry manure, and let it lie exposed to the elements until spring. The frost and sun wonld have broken up the subsoil into fine particles, then in early spring a man could have taken a deep-running corn cultivator and thoroughly rooted up and mixed soil and manure, and the land wonld have been ready for growing a good crop.

As it is, she will have to apply a heavy dressing of stable manure that is well rotted or very fine, then, as most likely the soil is deficient in potash, she should apply a heavy dressing of commercial fertilizer that is rich in potash. The soil should be ripped up and thoroughly pulverized twelve to fifteen inches deep with a deep-running shovel plow that will stir and loosen more than turn it. This will fit it for growing most of the coarser vegetables, and a light application of nitrate of soda, well raked into the surface, should make it produce good crops of radishes, lettuce, etc.

It should also grow a fair crop of potatoes if the seed is treated for scab before it is planted. We treat it as follows: Dissolve one ounce of corrosive sublimate in one gallon of hot water. Add to it five gallons of cold water. Pour in the potatoes, and leave them about two hours, then take out, cut, and plant at once. Remember that this solution is very poisonous if taken internally, but it will not injure the hands. It destroys metal vessels and must be mixed in wooden ones.

This treatment will not destroy the scab germs in the soil, but it will, in a large measure, prevent the potatoes from becoming scabby. It would be best, of course, to not plant potatoes in the infested soil for two or three years, but if I had no other land for potatoes, I would plant them in this. Treat this land as I have indicated a few years, keeping all weeds out, and you will have as good garden soil as you could wish for. Fred Grundy.

THE ROTATION BALANCE

Before the spring work begins the plan of the season's crops should be carefully made. In fact, the rotation should be so planned that this matter definitely adjusts itself from year to year.

The advantages of a definite rotation are so great that it is hardly necessary to present them. Among the most important are the following:

One. Different crops make different demands upon the soil. Continuous cropping with a single crop tends to exhaust some elements of the soil more rapidly than others.

Two. Some plants, particularly the clovers, root more deeply than others, hence bring up plant food from deeper layers.

Three. A good rotation permits the introduction of humus at frequent intervals. This is one of the most important benefits.

Four. Insects and diseases are more easily controlled. It is well known that many of these pests are far more serious under continuous cropping than under rotation.

Five. Rotations help to distribute the work better.

The rotation chosen should be carefully planned with reference to the needs of the particular situation. Its first object should be to provide as nearly as possible for the farm consumption, adjusting the number of acres of each crop to the amount of stock kept. It should also be so planned that approximately the same number of acres shall be in the right condition for the various crops each year. This may require some study and forethought.

The condition of the farm may also need to influence the problem. In general, the shorter the rotation, the more rapidly can the soil be improved. With a badly run-down farm a three-year rotation may be the wiser plan to follow, even though a longer one might be better adapted to the needs of consumption.

No rotation should be long enough to permit the grass sod to become weak before it is turned under. One of the commonest mistakes among Eastern farmers is to allow fields to remain in grass until it will no longer produce a paying crop, then plow it. The result is that there is very little sod left to turn under, so that little humus is formed and little progress made in the soil improvement.

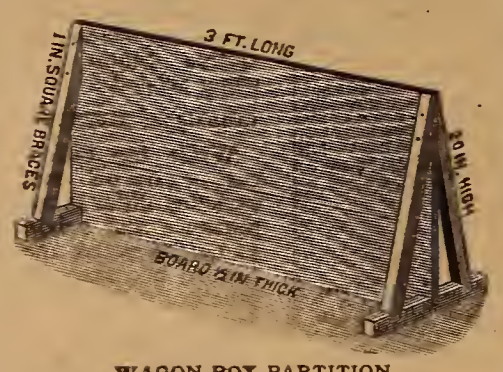
It is important to so plan the business that important crops shall not conflict in their demands for attention. A crop may be profitable and thrive well on the farm in question, yet be undesirable because calling for much attention at a time when other main lines must have first place. Farmers are often led astray in this. The temptation to undertake a crop which does not fit in well with the general plan, simply because it promises to be profitable, should be stoutly resisted.

Fred W. Card.

WAGON-BOX PARTITION

It very often happens that in the handling of the farm crops one has need to hanl two grades of a crop at the same load if it is a crop that is assorted in the field. Especially is this true in hauling corn that has been hnsked in the field. For years we have been using a partition board in our wagon box, and when picking up the corn it is an easy matter to sort it and put the soft corn in one end of the box and the good in the other.

This partition board is just of a length that it can be easily moved forward or backward in the wagon box, so that the space needed for either grade can be



WAGON-BOX PARTITION

pretty closely guessed. A look at the corn pile will generally give a good idea as to the amount of space that will be needed for each grade, and the board can be adjusted accordingly. At the crib we can unload each grade of corn where wanted, and without any loss of time, which sorting at the crib as unloaded would otherwise occasion.

For hauling two grades of potatoes or apples or any load that one does not want mixed, the board is a great convenience, but its greatest value to us is in hauling in corn, as we can sort and pick up a load just as quick as if we didn't sort it, and we always feel sure it pays us to grade up our corn before we put it in the crib. S. W. Burlingame.

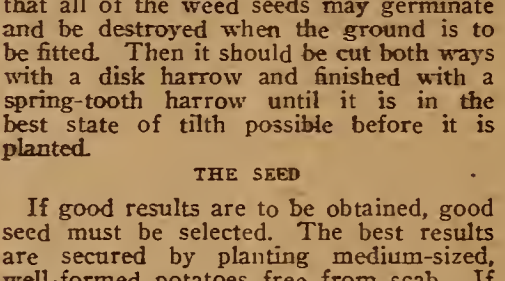
A FARM DRAG

The best way to make a "drag," "float" or "leveler" is to take four boards about eight inches wide and the length you wish your drag to be. Nail each pair together at right angles, like a trough, and face the joint outside with angle iron or steel, which you can buy the length of your drag. This iron should be bolted on securely. Now place the two troughs side by side about a foot apart and firmly spike them together by means of strong crosspieces, and your drag proper is complete.

But now comes the vital part and that which will double the efficiency of any drag; the hitch. All drags that I have seen so far are hitched so as to form a right angle to the line in which the team is traveling, but I hitch my drag at an angle of about thirty degrees by making one side of the chain that connects the drag to the doubletree, from six to ten inches longer. The effect of this is that it throws the soil sidewise instead of dragging it forward, and it will always be diagonal with your furrow, no matter whether you cross or follow the lines of your plowing.

You may throw the soil to the right or left by lengthening either one side or the other of your hitch. This drag will ride more steadily, throw the soil exactly in the direction you waut it, will cross a ditch at right angles without falling into it, and for covering a dead furrow it cannot be equaled.

The reason for making it in the shape of two troughs is to make it lighter to handle, and in the field to make it as heavy as you want it by simply shoveling soil into it. You don't have to hnnt up



FARM DRAG

any rocks of a suitable weight, and when you come to a part of the field that requires less weight, simply throw out some dirt.

The steel-shod under surface gives you a sharp cutting edge that can be reversed, and prolongs the life of the tool, and once used will never be discarded.

Edmund Dietz.

GROWING AND HANDLING THE POTATO CROP

Potato growing, like any other branch of farming, has its years of prosperity and its years of failnre, but for a money or market crop that is adapted to most sections of the country few will prove more certain or profitable.

We find that a thin coat of manure spread on a clover sod, and the ground plowed about seven inches deep and then rolled down as fast as it is plowed, so as to conserve all of the moisture possible, are some of the most important factors that go to make a successful crop of potatoes. The ground should be harrowed as soon as possible after it is plowed and rolled, and allowed to lay for about two weeks before it is planted, in order that all of the weed seeds may germinate and be destroyed when the ground is to be fitted. Then it should be cut both ways with a disk harrow and finished with a spring-tooth harrow until it is in the best state of tilth possible before it is planted.

THE SEED

If good results are to be obtained, good seed must be selected. The best results are secured by planting medium-sized, well-formed potatoes free from scab. If this disease is feared, the most successful remedy is to immerse the seed potatoes in a solution of corrosive sublimate. This is a rank poison, and must be used with great caution. Use two ounces of sublimate to fifteen gallons of water, and allow the seed to remain in the solution for one and one half hours, and when removed spread the seed where it will dry as rapidly as possible. If the potatoes are sprouted, allow them to lie in the solution but one hour.

Practical potato growers advise different methods of cutting the seed, and some do not cut them at all. The most common method is to cut them into pieces so as to leave two or three eyes on each piece. We prefer to have the pieces of good size, regardless of the number of eyes on a piece.

METHODS OF PLANTING

The depth of planting also varies with different growers. The roots of the young potato plants grow not directly from the seed piece, bnt from the underground nodes, or the points of the stem. From these underground nodes, or stems, also grow the short stems which bear the potatoes at their extremities, hence the necessity of planting the seed pieces deep enough to allow several of the joints to form below the surface, so as to allow an ample supply of roots and potato-bearing stems to form. Deep planting is objected to by many, on account of the increased labor and expense in harvesting.

We find working the crop more economical when it is planted in check rows thirty inches one way and twenty-six inches the other, and while we do not believe that we obtain as large yields when planted in this way as when planted in drills, we believe that we get a better quality of potatoes, and the amount of hand labor is decreased when the crop can be worked both ways with a horse and cultivator.

When potatoes are grown for early market the aim is to plant as early as possible without subjecting the plants to severe cold. The main crop should be planted at such a date as to bring the stage of growth during which the tubers are developing at a time when there is an ordinary supply of moisture. If there is anything on the farm that needs doing when the conditions are right, it is the planting of the potato crop, and many have lost faith in potato growing because they were never ready to plant when the right time came.

HOW TO CULTIVATE AND SPRAY

A week after planting, the field should be gone over with a weeder. This will level the soil and pulverize it at the same time, and will allow the sprouts to come up quickly through the warm earth.

Cultivation should commence as soon as the rows can be seen. If the ground has become packed, the first cultivation may be deep and close to the plants. Subsequent cultivations may be frequent. The conservation of moisture by frequent cultivation cannot be too strongly enforced. The old-fashioned notion that we must cease cultivation as soon as the blossoms appear is wrong. It should be kept up as late in the season as the size of the vines will permit. As the tops begin to spread out and shade the ground and cover the space between the rows they lessen the evaporation of moisture, and the cultivator should be narrowed and the space between kept covered with a loose, earthy mulch.

Experience and exact experiments favor level or nearly level cultivation. Excessive hilling during cultivation intensifies the injurious effects of dry weather. It also results in breaking many of the feeding roots between the rows. The cultivator best adapted to this work is one having a number of small teeth, so that it will leave the soil comparatively level.

Bugs are like interest on a mortgage, they work day and night. When the broods are first beginning to hatch is the time to act. The best-known and most practical remedy known is Paris green.

To a barrel of water use six or seven pounds of cheap flour and three fourths of a pound of Paris green. Mix the flour in a bucket of water and stir the Paris green in with it. When the whole mixture is completed, ponr into the barrel of water on the spraying machine, and keep the contents of the barrel well stirred while the machine is in action.

The only objection to this plan is that the flour tends to clog the screens in the pump. This can be avoided by having the screens set so that they may be taken out and readjusted quickly. The operation may seem troublesome at first, but one spraying kills the bugs. Dew, rain and wind will not remove it, and it will show for two weeks after the plants are sprayed, and destroy each hatching of bugs. The flour forms a paste that catches the fine particles of Paris green, and in turn adheres to the rough leaves of the plant. A barrel of this should go over about two acres of potatoes.

HARVESTING THE CROP

The digging and storing of a crop of potatoes is half of the labor in growing them and putting them on the market. Without a digger it is a long and tedious task, and I would advise every man who grows this crop to plan to have enough acres devoted to the crop to make it profitable for him to own a digger.

The best diggers are the ones that lift the soil and the potatoes from the row and sift the soil from the tubers and allow them to fall on the soil in the row. These improved diggers cost from sixty to one hundred dollars and are more economical in the end than the cheaper ones. There are numerous makes of diggers that do good, clean work, but the only way to determine which one is best adapted to your particular soil is to have a field test. Clean work should be demanded of any digger, for after growing a good crop of potatoes it should not be partly lost by using poor tools. If the soil is heavy, do not expect a digger to do good work without good, strong horses that will handle it to advantage.

The late crop is not fit to dig and put in storage until the cold nights in October, and here in New York we begin digging about the first week in October, and the work usually lasts until the first week in November. We use bushel baskets and crates when we pick up the potatoes, and haul to the cellar or to market as the occasion demands.

When potatoes sell for fifty cents from the field, many haul direct to the cars or market, and figure that price as good as seventy-five cents a bushel later in the winter from the cellar, owing to the shrinkage, waste and risk of holding for the increased price, and the expense of handling over in the cellar and sprouting, as is many times necessary.

The potatoes should be picked up as fast as they are dug, and stored in a dark cellar. Potatoes of the finest quality ever produced will be spoiled in a short time if exposed to light.

W. Milton Kelly.

EW

A SPRING POEM

'Tis now again, when spring comes 'round,
That the farmer runs things in the ground,
And fools away his time by the hour
Trying to get his plow to scour.

Tho' here and there, let it be said,
The plow was stored beneath a shed,
And when the team is ready to toil
He begins right off to turn the soil.

W. J. B.

SOWING OATS

Soon the farmer will be scattering the oats over the field, hoping to reap a bounteous harvest "in the good old summer time." Whether he does or not will be governed largely by the field, the seed and the season.

Oats require good, fertile soil to make a paying crop, the same as other grain. The man who sows oats on clay hillsides might as well throw the seed away, for nine times out of ten he will reap no reward for his labor. Land that has grown a good crop of corn the previous year will be an ideal place for oats.

The preparation of the field is important. If the oats are sown on corn ground, the farmer should have the stalks raked and burned. This will prevent any trouble with the stalks at cutting time. It was often our custom to hitch a horse at each end of a sixteen-foot pole, and break the stalks when the ground was frozen hard. If the pole is heavy enough and the ground hard enough the stalks will snap off at the earth's surface. Then they can be raked with a sulky rake and burned. Of course a stalk cutter can be used instead of a pole.

The oats should be scattered with a seeder. This puts them on the ground evenly. A common, two-horse cultivator may be used to plow them in. After the cultivator may be run the harrow, and this should be kept in operation until the ground is smooth, even if the field must be cross-harrowed. A level field is a delight to the man who rides the binder at harvest time, but a rough one is his abomination.

The seed must be good to ensure a crop. Musty or rotten seed is useless. Secure sound seed even if you have to send away for it to some seed house. Some have found it beneficial to treat the seed for smut before sowing. My brother did this one year, and produced as fine and clean a crop of oats as I ever saw grow. Fifty bushels to the acre was the yield.

The amount of oats to sow to the acre should be governed largely by the nature of the soil. The poorer the soil, the more seed it will take, because it will stool less. From two to three bushels to the acre, is about the average amount.

Of course the yield of oats will finally depend on the season. This a man cannot govern, but he should take care to sow in season. Too early sowing may freeze the sprouting oats. Too late sowing may put his crop where dry weather will strike it. Every neighborhood must be governed by its seasons in this matter.

Oklahoma. W. D. Neale.

SPECULATIONS IN CROP GROWING

Some years ago a number of Canadian moneyed men planted apple orchards in the southern part of the peninsula (Ontario) as a speculation. They imagined that all they had to do was to buy the land, plant the trees, and then a few years later come and harvest abundant crops of apples that would yield them a big income. They never dreamed that they might have to keep these orchards in constant tillage for a dozen or two of years, and spray them year after year, and otherwise work with them so as to protect them from their enemies. These trees are now in a state of neglect, and practically without value. The money so hopefully and confidently invested was simply wasted.

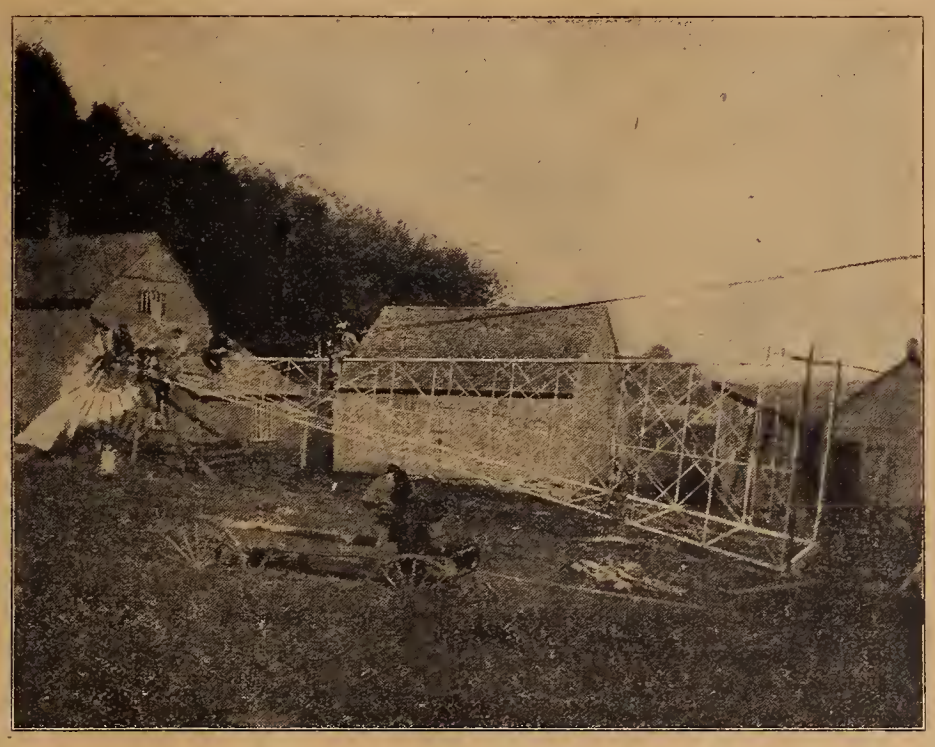
A few weeks ago I had a letter from a city man telling me that he (or a syndicate of moneyed men) had bought a large tract of low lands, presumably black muck, which they thought was admirably adapted to the growing of onions and celery. From the questions asked in this letter I could easily see that these men had heard the stories of big profits in onion and celery growing; they seemed to have arrived at the conclusion that if "the ignorant farmer" were able to make three or four hundred dollars on an acre by growing these crops, they, with their greater business ability, more money and greater willingness to spend it for fertilizers, etc., would find it plain sailing to double that income an acre; also that if six hundred dollars can be secured from one acre, fifty acres will bring them thirty thousand dollars. Plain as day. Easy as rolling off a log. A comfortable fortune in sight.

I am somewhat of a doubting Thomas, however. I gave a word of warning. I always do that when my advice is asked in such cases. It takes more than money, more even than ordinary business ability. A man may be a successful banker or merchant and a man of means. All that is not enough to ensure full success in soil operations. It requires practical knowledge of the business, knowledge of details, close application, promptness of action, readiness to meet new conditions and overcome unlooked-for obstacles.

Money may command brains. The only safe way for people who will go into these large-scale operations in crop growing is to associate with themselves some one of proper training in that field who has shown himself capable of carrying such enterprises to a successful termination. Such men command big pay. They are not often found running at large. They are either doing business for themselves, or in fixed, high-salaried positions.

The city clerk, or bookkeeper, or merchant, or railroad agent, or any other city man who has laid up or has come into possession of a few thousand dollars, and thinks he can go to the country, without previous preparation, and buy a little farm and raise any of these crops which are said to be so immensely profitable, in competition with the supposedly "ignorant" farmer already in the business, with the man who has had a life-long farm training, will usually find himself much mistaken. He has not the experience necessary to carry such an undertaking through to financial success, and he cannot afford to hire men who have the required experience. He may finally get the experience, such as it is, but this experience is not worth the price; and his money is gone.

I have also known a number of city people, mechanics, etc., who had good permanent positions and laid up a little money, and who were tempted by the alluring prospects of profits in raising or keeping poultry to give up their safe positions and go into the country to get rich in the poultry business. I have as yet to see the first one who did not, after a short time, go back to his former occupation, poorer in money, richer in wisdom. There are always others ready to plunge in, thinking they are so much smarter than the others who failed, and I seldom care to crowd my advice, "don't," on them, because they would not appreciate it or heed it. T. Greiner.



WINDMILL TOWER

A new steel tower put together and ready to raise, on an Olmsted County, Minnesota, farm

THE STEEL WINDMILL TOWER IS BEING RAISED INTO POSITION

SHARE FOR SON'S SERVICES

A reader in Indiana writes as follows: "I have a son twenty-two years old. I desire to give him a share in the crops, as I believe it would give him a better insight into the methods of farming than if I paid him wages. I have a farm of one hundred and five acres, and am in debt on a part of it. I have stock and machinery, and the buildings are in first-class shape. I have another son fourteen years old, and employ a man the year round. Receipts are about three thousand dollars a year, which I hope to increase as we are getting the farm in better condition. What share would be reasonable to give my older son, me bearing all expenses, also his board and washing?"

Gross receipts, or even cash receipts less cash outlay, form a very unreliable basis upon which to figure a share for services. They do not indicate the real gain or loss for the year's operations. I would suggest that in order to arrange this matter satisfactorily an effort be made to find out just what the farm is doing, then give such share of the real profit as seems wise under the circumstances. In order to do that it will be necessary to make a careful inventory of the property. This inventory should include the land and buildings, preferably appraising the latter separately, all live stock, implements, produce of importance on hand, etc. The comparison of this inventory at the end of the year with the one made at the beginning will show what the gain or loss has been.

In placing the inventory values it is necessary to consider carefully the matter of depreciation, otherwise the results will be misleading. This will average about ten per cent on implements and teams which have reached mature age, but the rate will vary greatly with the particular article. The depreciation on buildings will be much less, but should not be overlooked. Value for service should be the basis of the estimate, not what the article would sell for if offered for sale. Yet the cost of replacing an article must be considered. Oftentimes the fall in price of newly introduced implements will in itself make a heavy depreciation.

Having compared the inventory in this manner, to determine the gain made during the year, it will then be right to allow the farmer, whose capital is invested, a reasonable interest on this investment. Five per cent is a fair figure to allow for this. Safe investments can be had yielding this rate. On the portion which he still owes, whatever rate of interest is being paid should be used. The amount left after making these deductions is available for services. It represents what the labor and effort of those concerned have earned. It should not be a difficult matter for the father to decide what portion of this amount might rightly belong to the son. In some cases it might well be one half, in others much less. Much will depend upon the immediate conditions, the share of the responsibility borne by each, and the amount of work done by other members of the family. In some cases the son has a very easy end of the load; in others, particularly where the father is growing old, he has the brunt of it.

Living expenses are not a part of the farm business, but in a case of this kind, where the son boards at home and shares all the benefits of the home, it would be only right and proper that these expenses should be paid from the farm receipts.

The plan here outlined will involve some work, but it will be work which will be well repaid by the insight which it will give into the results of the business. To suggest a share of the gross income which would be fair would be almost impossible for an outsider.

It should be said, in closing, that this father is contemplating a wise course. The sons should have a personal interest in the outcome of the farm. No outsider is likely to render as satisfactory service from all points of view, and the sons should have the opportunity to acquire business experience. This should begin early. The younger son mentioned is none too young to have a share in some of the farm ventures. It need not be a large one, but let it be something. It was wonderful what an interest in pig culture was awakened in the three boys at Morningside, the oldest only about the age of this younger son, when they were given one small pig. They immediately decided to purchase another to keep it company. They are required to buy their own feed, and are learning what it costs to feed the animals. At the end of the first week they found that the increase in weight of pork would give them about twenty-five cents profit. This proved attractive and gave them a good lesson in business management at the same time. They are now increasing the feed, and will know what many a farmer does not know, whether they are feeding at a profit or a loss. I can rest assured that no ambition to leave the farm is gaining headway while this pig deal is on.

Fred W. Card.

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W. J. Burtscher.

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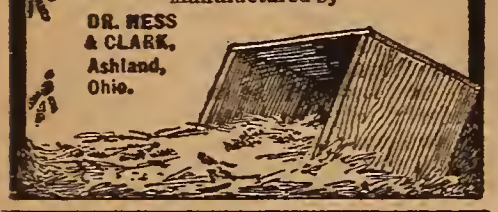

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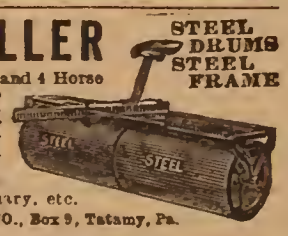

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Review of the Farm Press

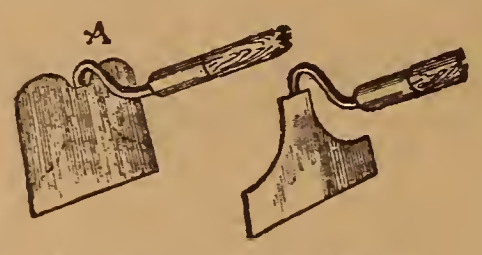
VITALITY IN SEEDS

The last ten years have brought better knowledge of the value of vitality in seeds. We cannot control all soil conditions; the weather is uncontrollable. But the public is awakening to a realization of the extent of poor stands in corn, potato, clover and grass fields, and we do know that high vitality in seeds is a prime consideration. I learned the value of this in the last ten years of my potato growing—it seems a queer thing that one would not realize it the first year he grew a crop of any kind, but that is not so. We incline to accept all missing and weak plants as necessary evils. It took our stations to awaken us on this point, and especially in corn production a great good has been done.

I meet successful corn growers who tell me that, as a result of station teaching, they have recently been roused to careful germination test of every seed-corn ear, and they are surprised to find how great a number of ears show weak germs, and how many fail to germinate at all. Vitality counts, and high vitality counts for much in an unfavorable season. It is one of the best lessons we are learning.—Alva Agee in The National Stockman and Farmer.

AN IMPROVED HOE

At one time we had more use for a hoe than we have had in later years. There are times when no other implement can take the place of the hoe. We have a wheel hoe, an eleven-tooth cultivator and other improved tools which have displaced the hoe to some extent, but we find more or less use for a hoe. When using a hoe we found difficulty in getting



A LIGHT AND CONVENIENT HOE

it to scour at certain times, and a hoe that will not "slip off" is an abomination. The parts of the hoe outlined by the dotted lines in Figure A seldom ever scoured. We took a hoe to the smith and had him cut away all that part of the hoe that failed to scour, and one would scarcely realize the benefit derived from this improvement. Then the hoe appeared as in the other part of the illustration. It remained bright with ordinary care. Almost any hoe can be improved by making this change.—The Iowa State Register and Farmer.

MAINTENANCE OF AN EARTH ROAD

The first step is to obtain efficient road officials, and after getting them, to keep them in office. Politics should play no more part in the management of roads than it does in the management of schools. A definite method should be adopted and followed.

OBJECT OF ROAD DRAGGING

Before giving definite instructions for operating a drag, it is well to keep in mind at the start the objects to be attained by this method of road maintenance, which are to smooth the surface of the road when it is soft and muddy, to move a small amount of moist earth to the center, and to maintain the crown or oval shape of the road.

The drag is not an implement to use to move large quantities of earth, nor does the maintenance of an earth road require the use of such an implement. A consideration of the theory of road dragging will help to make the use of the drag more fully understood.

THEORY OF ROAD DRAGGING

If a sample of moist earth is taken from the traveled portion of a road over a gumbo, clay or black prairie soil it will be found practically impervious to water, as may be proved by forming a roughly shaped dish of damp earth and filling it with water. It will be noticed that the dish is practically water tight.

Earth in this condition is what the clay workers call puddled. It has been worked and reworked by the carriage wheels and animals' hoofs until nearly all the traveled portion of a sticky, muddy road is covered with a layer of this impervious, puddled earth.

As usually found on most of the roads, this puddled earth is full of holes and ruts, which are filled with water that cannot escape through the impervious soil. As long as the water remains the soil cannot dry out, and the road is kept in a most uncomfortable, if not impassable, condition.

It is also a matter of observation that this puddled earth when compressed and dried becomes extremely hard. On these two facts, the imperviousness of puddled earth and its hardness when dried, rests the theory of road dragging.

INSTRUCTIONS FOR DRAGGING

The following points are to be borne in mind in dragging a road:

Make a light drag, which is hauled over the road at an angle so that a small amount of earth is pushed to the center of the road.

Drive the team at a walk.

Ride on the drag; do not walk.

Begin at one side of the road, returning on the opposite side.

Drag the road as soon after every rain as possible, but not when the mud is in such a condition as to stick to the drag.

Do not drag a dry road.

Drag whenever possible at all seasons of the year. If a road is dragged immediately before a cold spell it will freeze in a smooth condition.

The width of traveled way to be maintained by the drag should be from eighteen to twenty feet; first drag a little more than the width of a single wheel track, then gradually increase until the desired width is obtained.

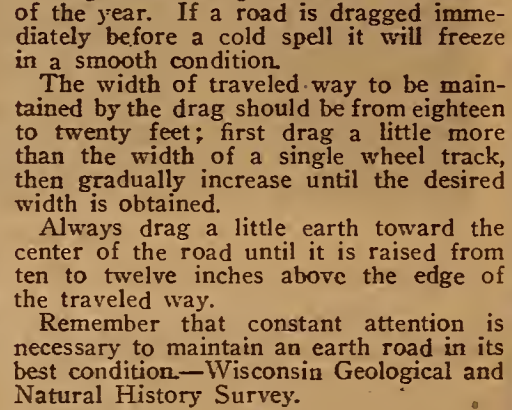
Always drag a little earth toward the center of the road until it is raised from ten to twelve inches above the edge of the traveled way.

Remember that constant attention is necessary to maintain an earth road in its best condition.—Wisconsin Geological and Natural History Survey.

A CONVENIENT AND CHEAP SHEEP BARN

Too many sheep are left out in cold and stormy nights, when shelter can be provided so cheaply. The following is a bill for a barn twenty by forty feet:

Go to the timber and cut five posts thirteen feet long, ten posts eight feet long, six poles twenty-two feet long. Set the five long posts in a row ten feet apart. On each side of the long posts set a row of the short posts ten feet from the center posts. Set all posts three feet in the ground. The posts being all set, place the poles lengthwise on top of the posts. This being done, we are ready for the rafters. Anything in the shape of a pole or rail twelve feet long will do. Place close enough together to prevent straw from going through; use two-by-four for nail ties on each side and ends. Any old board five feet long will do to



FRAME FOR BARN

side with. Leave the gable ends open, to admit light and air. Now cover with straw or fodder, commencing at the eave and working up. I cover with straw, as it is the cheapest I have. I have barns built this way that have gone through ten winters and are in good shape yet. They can be retopped, as the frame will last for years. I use chestnut for posts. I moved one barn this fall that had been built for eleven years, and the timber was all good. This kind of a barn can be built any height or length. I would not advise building any wider, on account of covering it.—J. C. Werts in The American Sheep Breeder.

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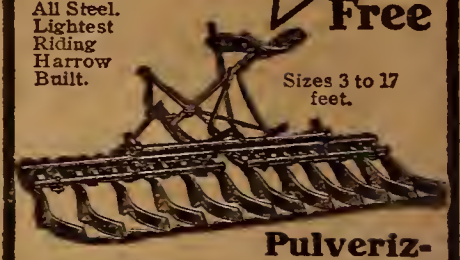

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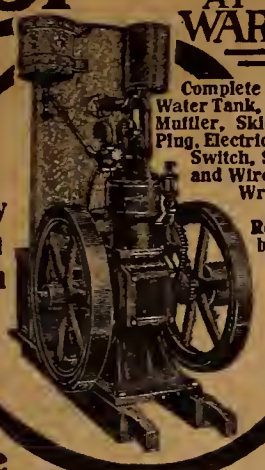

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Review of the Farm Press

SPRING CARE OF MEADOWS

By the time the grass starts the thin and unproductive spots in the meadows and pastures should have had a thin dressing of good manure.

Don't overdo the thing and pile on too much manure in one place, for that will kill out any grass that may be left, and produce too rank a growth for several feet around. Just a thin spread, put on soon enough so that the last snows and early rains will work it down into the soil, is all that is necessary. Go over these spots with a disk, if there are enough of them to make that necessary, and harrow down afterward, and sow a mixture of grasses. If these things are looked after every spring we will have cleaner meadows and a much larger crop.

We are doing too much slipshod work on our meadows and pastures. One should know precisely the grasses best suited to each particular field, and know just how to handle the soil of each to bring it to best condition to produce the best quality and greatest amount of grass.

In bringing grass lands to a good condition, the roller should be used every spring while the ground is rather soft. It will press the crowns back into the soil, and firm the whole seed bed so as to save moisture when the drying months of mid-summer come on. Heavy, firm soils are the best for continued growth, but an occasional disking will do most old meadows good. Sometimes there are spots which become so bound that they require vigorous treatment to get them into condition.—Indiana Farmer.

◈

AN ATTRACTIVE WELL HOUSE

There are at least three reasons why an attractive well house should cover the pump that is almost invariably a part of the country home equipment. A well house helps to keep the water in the well cool in summer, and also helps keep the pump from freezing in winter. If constructed along such attractive lines as are shown in the cut, a well house may be made to add beauty to one's surroundings.

The one here shown is built directly upon the usual square well platform of plank, this being allowed to project some six inches all about the house. The roof curves gracefully out to the eaves that overhang the walls. If the doorway is on the north side, no door need be used in summer; but this should be in place in winter, and the latticed windows should then have a sash fitted to them, or one opening can be fitted with sash and the other two covered with board shutters.

But the most important part of such a well house is the planting of vines to grow gracefully over the walls and roof.

SUCH A WELL HOUSE ADDS BEAUTY TO THE HOME

A shrub or two planted at the base of the walls will also add to the attractiveness of the whole. So simple a little building ought to be within the possibilities of the home carpenter, and having been made by him will prove all the more attractive—at least to the family.—The Country Gentleman.

◈

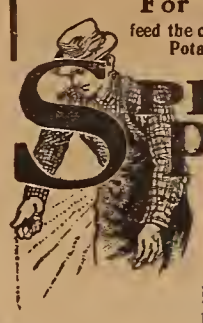
FORMALIN FOR POTATO SCAB

Scab on Irish potatoes may be prevented by soaking the seed potatoes for two hours in a solution of formalin made by mixing one pint of the forty-per-cent formaldehyde with thirty gallons of water.

Thirty gallons of the solution is sufficient for fifteen or twenty bushels of potatoes. If only a few bushels of potatoes are to be treated, a less amount of solution can be made by using lesser amounts of formaldehyde and water and preserving the same proportions.—Mississippi Station Bulletin No. 102.

For Abundant Crops

feed the crop with a generous supply of Potash in the fertilizer at the



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POTASH

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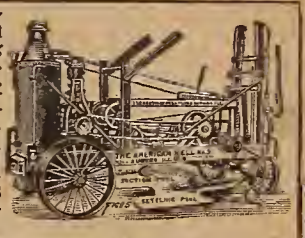

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Your choice as to **method** of separation,
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Better because the Empire experts are backed by the Empire factory, the best equipped and the best manned factory in the world for the production of cream separators—

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The Improved Frictionless Empire is the object of unqualified praise on hundreds of thousands of dairy farms today—it is famous from ocean to ocean—why?

Because it is better than any dairyman **expects** it to be, better than any dairyman believes a cream separator **can** be until he tries the Empire.

For it not only relieves the drudgery of ordinary dairying but banishes even the drudgery usually connected with operating other separators.

Its frictionless ball-bearings make the turning of an Empire a pleasure compared to the task of turning others. This patent protected bearing, together with its patent protected skimming device, place it in a class by itself as the simple, easy-to-turn, easy-to-clean, durable, dollar making separator.

And strive as they may, other manufacturers **cannot approach** its great advantages—at least not for years to come, not until our patents run out.

So, if you want the best all-round cream separator, the biggest money-maker, the most satisfactory in every way under all circumstances, we still say to you, as we have said in the past, get the Improved Frictionless Empire.

But such a machine, with its patented labor-saving, profit-making features, **must** cost a little more than some people want to pay for a separator. And to such people we say—get an **Empire Star** or an **Empire Disc.**

Our Improvement of Other Types

Because in these machines we utilize **other Empire patents** which place them far in advance of **all other** cream separators made, excepting **only** the Frictionless Empire.

The Empire Star comes nearest the Frictionless Empire in mechanical perfection, the Empire Disc represents the greatest step forward, the greatest **important improvements** that have been accomplished in disc bowl construction since the disc method was first used.

Empire Star

Because we ask less money for the Empire Star than for the Frictionless Empire, do not think for a moment that it is a "cheap" "slip-shod" machine. The Empire Star has a multiple-cone skimming device, consisting of fewer parts and parts more easily cleaned, than any other efficient skimmer on the market, save the Frictionless Empire.

It is not equipped with the frictionless ball-bearing feature, but in other respects the simplicity of its mechanical construction is practically the same as the model Frictionless Empire. No other separator for the money will give such satisfactory service day in and day out, year after year.

Empire Disc

We offer you the Empire Disc at a still lower price than we ask for the Empire Star. Disc separators are old—that is, the basic disc patents expired several years ago. There are, therefore, many styles of disc separators on the market.

And if **you** like the Disc type and want to save money on the first cost of your separator, we say and can prove to you, that the Empire Disc is the most efficient, practical, easy-to-turn, easy-to-clean, durable **Disc** separator that is made—it is the **most greatly improved Disc**—regardless of price asked.

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And when you know that the Empire Disc has **only three** closed bearings as against **five** and more in other disc machines, you can draw your own conclusions about ease of turning.

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Empire Cream Separator Co., Home Office and Factory: Bloomfield, N. J. Western Office: Chicago, Ill.

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Peter A. Berglund, Manhattan, Gallatin Co., Montana

Other Seed Advertisements on Page 25

Gardening

BY T. GREINER

Advice to Beginners

A. D. D., a reader living near Lake Ontario, New York, observes that there are many readers in cities and towns who know very little about gardening, and would get much help by being told just how to go at it. "I work in the garden solely for recreation, and enjoy it very much," he says. "The first year I made a failure because I planted everything too close."

Yes, there are many people living in cities and towns who have a little garden spot or could easily hire the use of a little piece of land close by that would do for a garden spot. Some of these people live up to their opportunities. They have found that the radishes, beets, lettuce, peas and tomatoes as they come fresh from their own gardens are so much more enjoyable, and palatable, and wholesome, and generally satisfactory than the vegetables of the same class which they can buy at the grocer's, and that they can have a full supply for the family of these things without having to pay out more than their means allow.

Yet there are many who have as yet failed to utilize that spot of ground near their residences for gardening purposes. What blessings they might easily dig out of that spot for themselves and for their families!

How to Go at It

The way to do is "to go at it." One difficulty with home gardeners in the suburbs of cities and villages often is in getting that spot plowed and harrowed. The teams are busy. Get some farmer or teamster of the neighborhood to plow your garden. Spading is slow and hard work. Yet if I could not get a team and plow, I think I would spade up the garden piecemeal, or try to get a man who is used to that kind of work to do the spading. Or you may be able to hire a horse and plow, and later on, perhaps, a horse and cultivator, to work the garden.

I often work up odd strips in my garden with one horse, and instead of harrowing such a narrow piece, run over it two, three, four or more times with the cultivator, then finish up with hoe and rake. These narrow strips, after being plowed, may be made fine and smooth, ready for sowing the seed or setting plants, by the use of hoe and garden rake alone. I often do that. And when the land is once ready for the seed, the rest is easy.

Have the close-planted vegetables—radishes, lettuce, early beets, carrots, parsnips, salsify, spinach, herbs, etc.—all on one side, and such things as cabbages, tomatoes, potatoes, sweet corn, cucumber and other vines, also peas, etc., on the other side, and all in long rows clear across. A little hand garden marker is easily put together and will help much. It may have three or four teeth with V-shaped points, these to be fourteen or sixteen inches apart. Draw this marker across the spot to be sowed or planted, in a straight line over the smoothed surface, and the marks will be just about deep enough to receive small garden seeds.

Buying Seeds

My earnest advice to you at this time is, do not go to the grocery or department store for your supply of seeds. It is not the best class of seeds you usually find there. You want the best. Best results in the garden do not come from poor seeds. Do not put your trust in old seeds you may have on hand, unless you know exactly what they are and that they can be depended upon. Do not accept any seeds from a neighbor as a gift or for pay unless you know that neighbor to be a good and successful garden maker.

The best thing to do is to send for the catalogue of one or more responsible seed dealers, and from it make out a list of the seeds you will need, and then buy them directly from the seedsman, or arrange with a neighbor or acquaintance who buys his seeds in this way to get yours, also. Much depends on the seed. It will pay you to take all reasonable precautions to get as good as there is. Good seed, good vegetables; poor seed, failure!

Sowing Garden Seeds

I sow the bulk of my garden seeds with the garden drill. This is a safe, easy and generally satisfactory way of doing the job. But often I have to sow trial packages of a whole lot of varieties, perhaps quite a short row of each, as for instance, lettuce, onions or a lot of herbs, etc. This must be done by hand. It is the same method that the average home gardener must practise. It is only in case that he should desire to sow a number of long rows of mangels for the cow or the hens, or other vegetables with a view of selling them to townspeople or grocers, that it would pay him to borrow a seed drill even from a near neighbor. The hand-sowing method will do well enough for these small lots of seeds, even when bought and used by the ounce, as may be done in case of radishes or of carrots.

For most things in the home garden a common paper or "packet" will be sufficient. Scatter the seed thinly and as evenly as possible in the freshly made marks, then cover either with the feet, which is easily done by a shuffling motion, or with the garden rake, drawing it over the row lengthwise.

Most of these close-planted vegetables—onions, lettuce, beets, radishes, cresses, etc.—are entirely hardy, and seed may be sown just as early in spring as the ground can be put in good order.

This is also the case with peas. The rows for them can be made two and one half feet apart, and a deep and wide furrow should be opened up for them with the hoe. I like to plant them three or four inches deep, and use plenty of seed. The first to plant is Alaska. A row one hundred feet long, using a quart of seed, is none too much. Cover with the hoe. In a week or two sow another row, Horsford's Market Garden or Telephone or any of the large, sweet wrinkled class. You cannot have too many peas. They always come acceptable, and we have them on the table frequently during the greater part of the summer.

Close Planting

Home gardeners, especially beginners, in their laudable desire to make full use of every square inch of their little garden spot, frequently overdo the matter of close planting. I like to have my grounds fully occupied with useful crops during the entire season. But we can easily plant too close, and that may mean failure.

I have seen rows of potatoes and the plants in the rows stand so close together in many of the back yards of suburban homes that there was absolutely no chance for the vines to make anything but a mat of tops. This close planting means failure. I usually have my rows of potatoes three feet apart. For the early varieties, which usually make only a moderate top growth, the hills in the rows should not be closer than fifteen inches. Eighteen inches is about the right distance in the rows for late varieties.

Early tomatoes or tomatoes of the dwarf type should have about four feet space each way, and the later standard varieties not less than five feet each way, unless they are trimmed to a single stalk or two stalks to the plant, and tied to a pole, when they may be planted three feet or even less apart. This method of growing tomatoes is especially adapted to home-garden conditions. A dozen or two tomato plants thus handled can be made a very attractive feature of the garden, and eminently useful.

Cucumber and melon vines should be planted in hills five or six feet apart each way, a dozen seeds or more to the hill, and the plants afterward thinned to four or five to the hill. Squash vines and watermelons need about ten feet of space each way to the hill. All these things, however, need not be planted until the beginning of warm weather, May fifteenth, or later in the Northern states.

Fruits and Flowers

Even the most modest home garden has room for at least a few fruits and a few flowers. On one side or along the fence (if there is one) you may plant a few currant and gooseberry bushes, a grape vine or two, a few plants of rhubarb, and a strip off one side may be devoted to strawberries. And you may also have a few annuals, such as sweet peas, asters, verbenas, phlox, stocks, poppies, larkspurs, etc., along the border or in a bed or two by themselves.

All these annuals and many more are easily raised from seed, and help to make the garden attractive. The money for seeds is well spent, and the efforts in garden making are usually well repaid.

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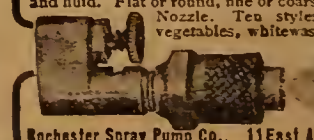

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Fruit Growing

BY SAMUEL B. GREEN

To Save the Forests

THE annual meeting of the American Forestry Association, held in Washington, D. C., January 29-30, 1908, was one of unusual interest. It was the twenty-seventh annual meeting and over four hundred delegates, representing all parts of the United States, were in attendance.

The object of the association is to conserve by wise use, and to extend by replanting, the forest areas of our country. The meeting was opened by the Hon. James Wilson, Secretary of Agriculture, and president of the association, who gave a brief but earnest address. He said, among other things, that the American people are now rapidly learning the actual condition of our forests, and are beginning to have a realizing sense of their importance. Our future timber supply, our water supply, and even the character and condition of our soil, depend largely upon the forests. The improvident cutting and burning of our trees, especially at the head waters of our rivers, is a menace to the whole country, and it is high time that the Congress of the United States was seriously considering this great problem. If not, we will lose the use of our great rivers, as well as the soil of our hills and mountains. There is nothing more noble than the rehabilitation and preservation of the forests. For this we work not alone for the present, but for future generations.

Hon. Gifford Pinchot, Chief of the United States Forest Service, followed with a stirring address on "The Situation Regarding Our Natural Resources." He spoke, in part, as follows:

"The question of the conservation of the natural resources is coming to be a vital question in the minds of our people. This is the first time in history that a great nation has declared that it will take intelligent charge of the land over which it has control, and will make the best use of the natural resources which have been given to it, both for the present and for the future. By virtue of this conception of the duty of the nation, our natural resources, which we have undertaken to handle along many different lines, become so many elements in the solution of the great single problem.

"Whether it is a conservation of the forests for the sake of the timber, and the preservation of the water power for the domestic supply, or for the sake of navigation, whether it is the protection of the public lands of the West in order to provide more homes for the people, whether it is the safeguarding of mineral fuel to prevent the exhaustion of that prime necessity of our civilization, whatever unit of conservation it may be, we know at last that it is but part of one single problem, the elements of which are so interrelated that it is impossible to separate any of them from the central problem of conservation and all its other elements. You can no more separate forestry from navigation than you can separate mining from the timber supply, for the one great essential for navigation is to prevent the filling of channels with silt, and that depends directly upon forest protection."

Mr. J. S. Whipple, of the New York Forest, Fish and Game Commission, said that the "Empire State" was the pioneer in expensive and comprehensive forestry work, and gave statistics to verify his statement.

In the afternoon session the lumbermen of the country were represented by Mr. G. K. Smith, of St. Louis, secretary of the National Association of Lumber Manufacturers, and Mr. F. S. Underhill, of Philadelphia, vice-president of the Lumberman's Exchange and one of the directors of the National Forestry Association.

These speakers agreed that nearly every lumber association in the country had taken action looking toward forest preservation, and that in many sections a greatly improved and more rational system of lumbering had been adopted.

Among other speakers were the following: "Forestry as a National and as a State Problem," by Senator J. H. Gallinger; "Interest of the South in Appalachian National Forests," by Gov. Hoke Smith; "The Need of the White Mountains for Protection," by Prof. G. F. Swain; "Forests and the Health," by J. H. McFarland.

Several important resolutions were adopted, one calling upon Congress to pass the bill establishing national forests in the southern Appalachian and White Mountain regions, and another to provide for a national census of standing timber in 1910.

WILLIAM R. LAZENBY.

BERRY HARVEST IN WESTERN NEW YORK

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CARING FOR ROOT GRAFTS IN WINTER—COVERING APPLE GRAFTS

J. E. M., Kline, Colorado—In caring for apple grafts in winter it is necessary to have cold storage. This may consist of a cave out of doors, or, more commonly, a cold cellar. The roots are gathered in autumn and stored in such places, preferably packed in sawdust or sphagnum moss. The scions should be cut in autumn and stored in the same way. It is important not to have the sawdust very wet, or the wood is liable to become injured.

The scions, roots and grafts may also be stored in good, clean sand in the cellar, but the objection to this kind of storing is that the sand grains are liable to stick to the bark, and in the grafting process are troublesome from their taking the edge off the knife used in working them.

I think the best way of covering the unions on apple grafts is to use cotton cloth or paper which has been dipped in grafting wax and cut or torn into strips. In order to do this to best advantage the wax should be hot, and the strips of cloth or paper not over three or four inches wide. They should be rolled up, dipped into the hot wax, and then the surplus wax removed by drawing them over a piece of glass or otherwise. The strips should then be cut about one half inch wide.

Some nurserymen prefer to use soft waxed string for this purpose. In order to wax these, the balls of string are put into the hot wax and boiled for some time. The wound is then bound with this soft waxed string.

FARM AND FIRESIDE doesn't believe in the "penny wise and pound foolish" policy of publishing misleading and deceitful advertisements. We might make a little more at first, but our subscribers would lose much more in the end. We investigate thoroughly every advertiser, and if we accept his advertisement, we guarantee it to all FARM AND FIRESIDE folks.

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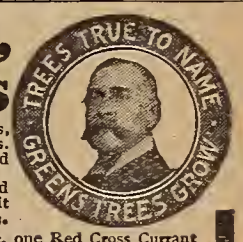

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Live Stock and Dairy

The Coming of the First Lamb

"Oh, come quick, pa, ma! Nan's found another lamb! Come down and see it! The funniest little thing you ever saw! Its legs are awful long and clumsy! Where do you suppose she found it? I guess it must have been under the manger, 'cause there's the snuggliest little place there, just big enough for a lamb to hide!"

And so the interrogation and exclamation points fly in every direction as Laddie speaks, his eyes sticking out big with excitement. It is a hurrying time of the year. and no mistake. Scarcely time or patience for us to drop the thing that happens to be on hand and get ready the best we may to go down to the barn where that wonderful first lamb stands by the side of its meek-eyed mother.

And this is really a great event on the farm, for Nan is the sheep that grandfather gave Laddie when we first came on the place. That is a way he has of "setting out" all the boys that happen to be worthy to call him "grandpa." We had a great time bringing Nan home when she was a lamb, scarcely more than six months old. We took her in the farm wagon carefully, for this was a rare gift, the sure token of the great love of grandfather, and there must be no mark of indignity placed upon the young sheep. She was to be the pioneer of a great army of sheep that were some time to be on the farm.

And Nan had such care as only a sheep of such great promise was entitled to. How many times those first few days do you suppose our boy was out in the yard doing his best to get acquainted with his new possession? Tell me the hopes you have had of the outcome of your first great life undertaking and I will answer that question.

And here was the first lamb, that mysterious creature coming from no one knows where and promising who knows what for the days to come, when the one ewe lamb shall have grown to be a great flock! Through the weeks that have passed our sheep has had, also, the best care of the master of the farm. He knows that upon the care the mother sheep receives now will in great measure depend the fortune of our new lamb by and by.

So we have given the sheep the cleanest, sweetest hay on the farm. Stored away in one corner of the barn there had been a nice load of good clover hay waiting for just this occasion. Nothing that ever grew in the way of grasses is better for the sheep in winter than good, clean clover, cut at the right time, which is while still in blossom, and cured so that it shall not be dusty.

And then we have fed our sheep some grain. Not heavy grain, like corn meal, for that would be too fattening; but oats, a little handful every day, alternated with wheat bran, one of the best of foods for sheep at this season of the year. Now and then we brought down a few small potatoes or a nibble of turnips from the cellar, and these have all had their relish of salt to go along with them. Of all animals, sheep are the most fond of salt.

Every day our sheep has had a chance to exercise a little. That has done her good. Sheep are like people in the matter of exercise. They must have it or they will get sick from indigestion and other bad things. Out in the yard there has been plenty of good, pure water always at hand, another thing sheep need every day. I have seen it recommended that sheep do not need anything more than the snow they have a mind to eat in the way of drink. That never seemed to us the right way to treat a sheep. I know you and I might manage to get water in the same way, but would we really enjoy it, after all? Seems to me not. So we did not force Nan to that extremity.

Nor was that all we did for our beautiful sheep. We took good care of her at night, especially just before that new lamb came. Every night she was brought into a warm stable, where no sharp winter wind could reach her. In this way we guarded against chilling of the tender creature when it came. It is a hard job to resurrect a lamb that has been chilled. I know the old Scotch shepherds say that if a lamb has not been dead more than half an hour you can bring it back to life by taking it into the house and dipping it into hot water and forcing down some hot milk with a grain of pepper in it; but this always seemed to us not the wisest thing to do. Better look out a little ahead and guard against the chilling.

And now our new lamb is here. It shall have the best attention we can give it. The mother sheep shall be fed good, nourishing hay and grain. In a few days we shall begin to increase her ration of grain, feeding now some corn meal, which is fine for milk making. It will not be long before the lamb can go out of doors on sunshiny days. That will give it new life. Just see how it will stand and fairly soak in the warm sunlight! Then it will begin to kick up its heels. The clumsy legs will straighten out and take better shape. Then it will give Laddie a chase to catch it, and yet it surely will love him, for he will be kind to it always.

Grandfather's gift will bind us all more firmly to the farm. E. L. Vincent.

THE BROOD SOW

The successful raising of pigs depends largely on the care given the brood sow, especially if she is to farrow in the fall or winter. In the warm weather she does not need so much attention, as she seldom ever demands a shelter, and feeds largely on grass or clover. As the fall months come on and the grass gets short the owner should see that she doesn't run down in flesh, and when the cold weather sets in he should provide a comfortable shelter.

There are many who think a brood sow should not be fed more than about half rations until after she farrows; but keeping a brood sow poor is never a wise policy. She may not need as much feed before as after farrowing, yet to suppose a half-starved sow will give birth to a strong, healthy litter of pigs is erroneous. Of course it is not best to feed the brood sow much corn. What she needs is food rich in protein, together with succulent feed. She should be given her rations as a slop, for this will tend to keep her bowels in good condition. Constipated bowels at farrowing time will often result disastrously to the sow.

Be certain to see that the brood sow gets plenty of exercise. In the late fall and winter she is apt to lay around and become overfat. Have her sleeping place some distance from her feed trough, and she will be compelled to stir about a good deal going back and forth to them. Also scatter a little grain in some straw, and she will work to get it.

Her bed should be made of chaff or straw, and sheltered so she will be protected from rains and biting winds. Be careful to have the entrance clear, so that she will not drag herself over rails, boards or rocks in getting into it. Have the house open toward the south, so the warm sunlight may pour in and the cold northwest rains may not beat upon her bed.

After farrowing, do not feed the sow for twenty-four hours. Then give her a warm, thin slop of bran and shorts. Feed her very lightly for several days, and do not place her on full feed for ten or fifteen days.

Soon the little pigs will manifest a desire for something beside the mother's milk. They may now be fed a mixture of skimmed cow's milk and middlings. A small board pen, to keep out the sow, will be necessary to feed them in. Be certain to keep their trough clean, that no disease may breed. By this slopping, the sow's strength will be saved, and weaning will be an easy matter, resulting in no loss of flesh to the pigs.

W. D. Neale.

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of durability in a high-speed machine like the cream separator. No other machine a farmer uses has harder use. Run twice every day, winter and summer, it must not only do thorough work, but to be permanently profitable, it must be durable.

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are built for long service. A solid, low frame encloses entirely all the operating parts, protecting them from dirt and danger of injury. The parts are few, simple and easy to get at. Ball bearings at high speed points, combined with automatic oiling reduce wear as well as insure the easiest operation. Such careful and thorough construction is what enables the U. S. to better

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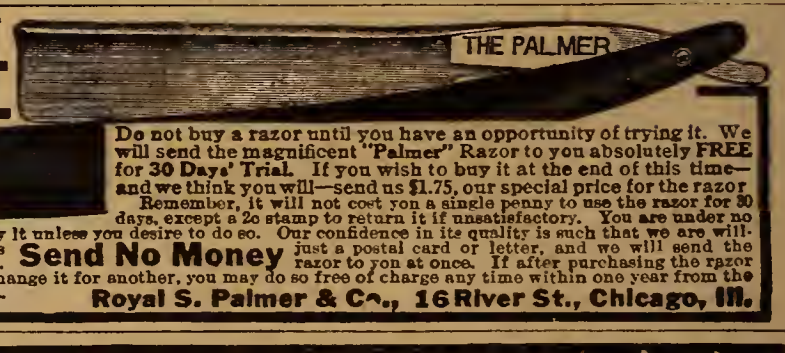

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47 Runabouts, Buggies, Surreys, Spring Wagons, Farm Wagons, etc.

Live Stock and Dairy

POINTS FOR THE STOCKMAN

IT IS estimated that the average cow uses from sixty to sixty-five per cent of her food to maintain her physical strength, while all the rest goes to milk. If a cow uses but little more for herself when giving forty pounds of milk than when giving twenty, it shows the importance of good feeding.

Do not lose money in trying to save a little by refusing to feed cows when the pasture gets short. Many good dairymen feed their cows at least a little every day in the year, and profit well by it.

Wheat bran is one of the finest of dairy feeds, but it contains only about one third as much protein as cotton-seed meal, and often costs about the same a ton; therefore the dairyman is paying three times as much for each pound of protein. If the dairyman is obliged to buy feed, the most concentrated will usually prove the most economical.

If a horse has the heaves, feed less hay and more grain, and water him before feeding. A horse with the heaves should not be worked hard within an hour after eating, and too much should not be expected of him. Feed wet feed when it is convenient.

You've no doubt had a hog get contrary when loading into a wagon. Well, a very good way is to put an ordinary zinc bucket over his head, and he will back up to try to get his head out of it; by following him up with the bucket, he will be backed into the wagon before he knows it. Try it. COLLIN SHAVER.

THE COW AT CALVING TIME

The whole question of caring for the cow at calving time may be summed up in one word—comfort. Plan to have her comfortable, above all things. A week before the time for her to drop her calf she should be removed to a comfortable box stall, have a good, dry bed with an abundant supply of straw.

She should have the amount and quantity of food which she will relish sufficiently to lead her to eat a reasonable amount, and it should be balanced so that it will just keep up a good and thrifty condition. Too highly concentrated food will fail to give her the proper stimulus of distention, while a ration of poor food will be the reverse, so that in drinking sufficient water she will take an uncomfortable amount of it.

In all instances early cut grass (well-cured hay) is the best adapted to her needs of any fodder, and we do not believe in the practise of messing the cow with grain feeds for a week or two prior to calving. It makes an unnecessary amount of blood in the system, and this is not desirable at that time, and in some cases is productive of milk fever and other inflammatory attacks. It will be found safer to diminish the tendency a few days before and a few days after calving by rather light feeding.

The time required in parturition varies considerably. In some cases it is rapidly and easily completed and in others it may be protracted and delayed for hours. Give the cow time. Do not interfere until it is absolutely necessary. Interfering too soon and trying to get the calf away before all of the parts are ready has caused the loss of many calves, and the cow if not lost, is often severely injured.

After the parturition is completed, next comes the care of the calf; and we believe in leaving that to the cow, for she can perform it best with her warm rough tongue, and she likes it, and the operation has a soothing effect upon her and allays the fear and excitability caused by the act of parturition.

Some seem to have the idea that calves should run with their dams a few weeks, in order that they may bunt their bags down and keep them from caking. This is all nonsense. No violence should be tolerated, and gently bathing the udder with warm water and rubbing is the most agreeable to the cow and more useful to remove the soreness and inflammation.

If the placenta is not discharged in the course of six or eight hours, bathe the small of the back with warm milk or water, and don't go to doping the cow with strong medicine; if it fails after that treatment, send for a good, careful man who understands the work, and have him remove it carefully.

W. MILTON KELLY.

THE TUNIS SHEEP

In 1894 FARM AND FIRESIDE published an account of my venture with Tunis sheep, of which I had just brought ten head from South Carolina to Putnam County, Indiana. At that time there were only about forty head in America.

The experiment proved a great success, far beyond our most sanguine expectations. We have organized the American Tunis Sheep Breeders' Association, and now have flocks planted in thirty states, also in the British Isles, Mexico and South America. We have forty members, with over two thousand sheep recorded, and will soon publish the second volume of our flock book.

The demand for Tunis sheep exceeds the supply, and is still increasing. I have no sheep to sell. I consider FARM AND FIRESIDE one of the best papers published in America. JAMES A. GUILLIAMS.

HEAD OF WHITEHALL MARSHALL, CHAMPION SHORTHORN BULL OF THE WORLD

It is only once a year that we ask all our good, loyal friends to turn out and put their shoulders to the wheel for FARM AND FIRESIDE. This year the day is March 31st. If you like FARM AND FIRESIDE, won't you get two of your friends or neighbors to take it, and send the subscriptions to us FARM AND FIRESIDE Day, March 31st? We are counting on you.

SWEEPING THE FIELD

What The New 1908 De Laval Cream Separators Are Doing.

Reports are arriving in every mail from Maine to California and Canada to Florida, telling of how the New Improved De Laval Cream Separators are sweeping all would-be competition aside. Cow owners and separator users everywhere cannot say enough in praise of the new De Laval. Even competitors are admitting its vastly increased superiority and marveling at its many conveniences, perfect skimming qualities, ease of running, great simplicity, durability and beauty of design. The new De Laval is ten years in advance of any other separator made to-day. Nothing like it has ever been produced before and to have done so now is only possible after three years of constant experimenting by the world's best engineers and mechanical experts backed up by our thirty years of experience in the manufacture and sale of nearly a million separators. Improvements have been made in every feature and several brand new styles and capacities introduced. There is a machine for every size dairy from the smallest to the largest and at a price that will fit every pocket, while you may buy for cash or on terms so liberal that the machine will actually pay for itself.

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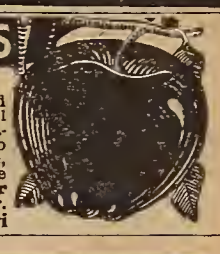

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A hen does well or poorly according as her food supplies necessary nutriment in right proportions. Doubtless you give a nutritious ration, but does the *larger part of it digest?* If not, your profits will be in dimes rather than dollars.

It is easy to see why this is so. The domestic hen is a captive; she is denied the privilege of selecting food at times and in ways that Nature meant she should. Man attempts to coax and cajole her into laying many eggs under these unnatural conditions, and it is evident there can be little success until natural conditions are restored as far as possible.

If you make the hen derive from her food the same elements she would get when at liberty, your eud is gained. This can be *largely* brought about by giving once a day a small portion of

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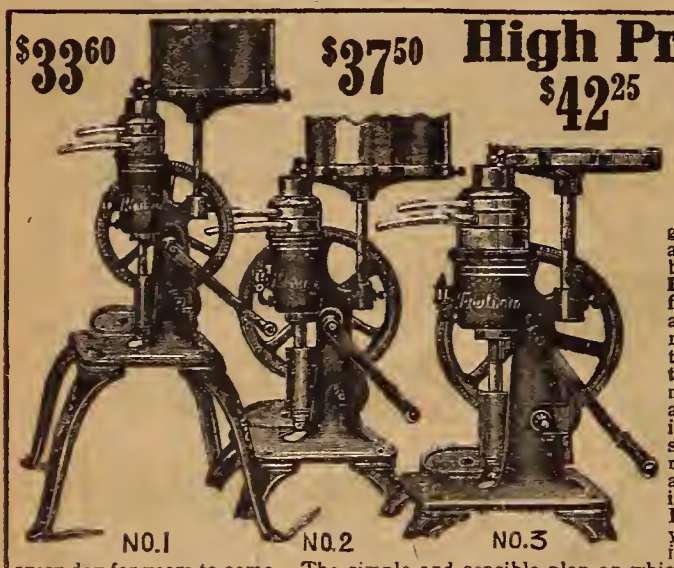

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THICK SLOP FOR HOGS

I AM convinced that there is a tendency among farmers to feed too thin slop to hogs and pigs. It is not at all the amount of the slop that nourishes the hog, but the quality and content of nutriment.

Large amounts of water overtax the kidneys, especially in winter; extra energy is consumed in expelling the needless excess of water from the system. Besides, the extreme dilution of the slop tends to disturb digestion and to chill the animal if fed cold.

Troughs swimming full are sure to be tilted by hungry hogs, or the feed is splashed over the sides of the trough by crowding of fore feet and chops. Feed wasted by the animal in this way is just as unpardonable as if the farmer were to deliberately throw it upon the ground; he is responsible alike for both.

We much prefer to feed thick slop in the bottom of the trough. When this has been eaten, we pour in water and allow the hogs to drink what they require. It is handier to have two troughs—one for slop and one for water; we often do this. Care is necessary in feeding large hogs, especially brood sows, as they smack violently when fed thick slop, and much is lost if the trough be small or full. This may be overcome by spreading the thick slop over the bottom of a wide trough; or, by simply moistening the meal, it may be eaten easily from the trough without loss.

The farmer should never console himself with the thought that the greediness of the animal is sufficient excuse for wastes in feeding; only the feed that is eaten is the feed that pays.

GEO. P. WILLIAMS.

THE DAIRY INDUSTRY

The foundation of all prosperity in the dairy industry lies in the cow, and undoubtedly much has been done in recent years to improve the dairy stock.

The only way to weed out inferior stock is by the systematic weighing of the milk, either daily, weekly or at some other frequent interval. The practise seems to be gaining ground, and on many dairy farms it has been adopted. It might appear then that it is becoming universal, but it must be remembered that we, as a rule, only notice first-class farms, and unfortunately milk records are yet the exception rather than the rule. In some quarters they are regarded rather as a fad; still we find practical dairy farmers adopting the system and declaring that it is putting money in their pockets.

Of course, the ideal system is weighing and testing the milk as well, but this is hardly likely to become general. Still, if the weighing is done systematically, this will serve an extremely useful purpose, and sufficient for the requirements of the milk seller so long as the standard is surmounted.

As touching the economy of the cow, an interesting method is that adopted by some Jersey owners, who tether the cows at pasture, moving them to fresh herbage as they clear up. This is the method pursued in the island of Jersey, where it is thought that cows do better in this way, and that the system is more economical. It approaches closely to the soiling system, and it is possible that some economy in pasture is effected, though the labor must be considerably increased.

Apart from the inherent qualities of the cow and her feeding, the most important feature, perhaps, is the housing. Milk production is to a large extent dependent on the nervous system, and accordingly comfortable quarters are of primary importance. Good houses are of importance, too, from the sanitary point of view, and one of the essentials of a good cow barn is that it can be kept clean with little trouble; for if there is to be much trouble in cleaning, it may be taken as fairly certain that the cleanliness will not be scrupulous. Cleanliness is, no doubt, also to be recommended from the point of view of the cows, for it will generally be found that cows will do better and yield better when the houses are kept clean. One of the most important points in promoting cleanliness is that the stalls should be adapted to the size of the cows. The size and width of the gutters are also an item of importance, and in some cases they are too narrow to be efficient.

In all modern cow houses provision should be made for keeping a supply of water before the cows in the winter time; also provision should be made for the milkers washing their hands before beginning their task; and finally no person who is suffering from any contagious disease or has in any way been in contact with any person suffering from such should be allowed to milk.

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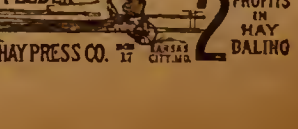

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Little was known of this excellent water fowl on this side of the water prior to ten years ago. The history of its origin is somewhat obscure, but it is said that it was introduced into Scotland some twenty years ago by a sea captain, who plied his trade between the British Islands and the West Indies. Thus it got its name, "Indian," with the affix "Runner" to denote its chief peculiarity—moving over the ground rapidly.

Indian Runners are a distinct type, having long bodies, a graceful carriage, and standing very erect when on the move. The neck is long and slender, head well proportioned, but the bill is unusually large and wedge shaped. Unlike other breeds, it has no quack, a point which is highly in its favor.

There are three distinct varieties: Fawn and white, brown and white, and white. The fawn and white variety is probably the most popular, although not superior to the others from a point of utility.

The Indian Runner is smaller in size than the Pekin duck, but is very toothsome for table use. It is a good forager, and will tramp through the fields all day in search of bugs and worms. It is one of the few breeds which will thrive equally as well without water in which to bathe, although water for drinking purposes must be supplied at all times.

The Indian Runner will not stroll away if allowed to follow a stream of running water, but can be depended upon to come home every night to roost.

The young ducks are easily raised, either by natural or artificial means, and those hatched in March or April will begin laying in December and continue through the winter months, thus filling a breach when eggs are scarce and high priced.

H. P. H.

THIRTY-FOOT BROODER HOUSE IN THE "CLEAR VIEW" POULTRY YARD

And then we discovered that she had a variety of good, clean food. In one barrel, from which she drew every day, was buckwheat, which was fed whole. In another barrel was plenty of good oats. In a sack near by were a lot of oyster shells. At times there were some partly rotted apples. The floor was kept well littered with straw.

But, best of all, she said:

"Most every morning I carry them out a panful of sour milk."

Ah, there was a secret worth knowing! That pan of sour milk was worth its weight in eggs! If we all set more store by the panful of sour milk we would get more eggs. Of that I am satisfied. The smart men that can take things all to pieces and tell us what is in them say that milk has lots of things in it that the hens need to make eggs. What difference does it make what those things are? The thing to know is that milk makes eggs. And it does so every time.

V.

ADDITIONAL FLOOR SPACE

An excellent way to make more floor space in the hen house is to build a platform or drop table. The size of the table must be determined by the size of the house—four feet by ten feet is a convenient size.

Build the table as you would a door, the cleats to be on the under side. Nail a three-inch strip around the edge of the table, to hold ashes and other scratching litter. Hinge the table to the side of the hen house, and let the outer corners be supported by hinged legs, to hold it up when in use.

If a permanent platform is desired, build it the same as the table. The best place for the platform is near the center of the room.

The legs of either one should be about three feet long. This will give the birds all the original floor space and forty or more square feet additional. Throw on a liberal supply of earth or ashes covered with fine straw, and the hens will show their appreciation of your attention.

A. G. MARTIN.

CLEANING EGGS

The best way to have the eggs clean is to see that the nest material in each box is kept clean at all times.

If but a few eggs are soiled, these should be kept at home for use, and they may be safely washed if they are to be used within a few hours.

If it is necessary to cleanse the shell of the eggs which go to market, a good plan is to take them in hand as soon as they are brought in, and with a Canton flannel cloth go over them. If the soil still sticks, breathe lightly on the egg and wipe it again, always with the dry cloth.

Eggs which are wet spoil very quickly, and the moisture removes the bloom from the shell.

GILBERT ALLEN.

HARBORING OLD CHICKENS

The practise of keeping old hens and roosters from year to year is extremely unprofitable and degenerating upon the flock of farm poultry. In the first place, it leads to haphazard inbreeding, that tends to produce mongrel and weak chickens; then, the old fowls are much more liable to perpetuate such afflictions as lice, scaly leg, roup, etc. The older fowls becoming weaker, many die from time to time, which causes actual loss; besides, old hens lay fewer eggs than young ones. All fowls showing sharp spurs and those known to be old should be sold without the exercise of favor or sentiment.

GEO. P. WILLIAMS.

WHY SHE WAS GETTING EGGS

No one else was getting eggs at the time, but every night she brought in from six to eight from her brood of about twenty-five hens. They were worth then thirty-five cents at the door. And people wondered how she managed to have so many to sell. She let us into the secret in the following way:

First, a good warm house for the hens to stay in. The house was well lined and battened, so that it was about as warm as the house in which she lived herself. And she kept her hens in that house all the time when it was cold. No wading through the snow to get chilled.

POULTRY JINGLES

A farmer bought an incubator
Which he thought would be a hatch maker;
Every April chick so small
Began laying eggs that fall,
And now his income is much greater.

The man who goes on a "wild-goose chase"
Is apt to find it a costly affair,
But he who gives the tame goose a place
Will have a dollar or two to spare.

W. J. B.

Our guarantee of the advertisements in this paper means much to you in buying your implements this spring. You will make money by dealing with FARM AND FIRESIDE'S advertisers.

GLOBE INCUBATORS

100% HATCHES EVERY FERTILE EGG

do this all the time—have done it for 16 years. They hatch strong and healthy chicks—chicks that live and grow. Every latest improvement—patented hot waterpipe system and automatic heat regulator. The best machine, either for beginners or for professional poultry raisers.

Our Free Book on Globe Incubators tells you how to make more money out of poultry. Marvelously complete, with beautiful color plates, and worth dollars to those using Incubators. Sent free on application. A postal will bring it.

C. C. SHOEMAKER
Box 469, Freeport, Ill.

You'll Start Raising Chickens When You Get My Price

Let me quote you my 1908 low price for a Chatham which will start you making extra chicken profits when you read my valuable new free book.

Chatham Free 1908 Book

Gives you the benefit of my 50 years' successful experience FREE—write nearest office for it today.

The Manson Campbell Co.,
112 Wesson Av, Detroit, Mich.
1308 W. 11th St, Kans. City, Mo.
82 E. 3rd St., St. Paul, Minn.
Dept. 24, Portland, Ore.

84 Days' Free Trial, Freight Prepaid

Incubator Whys

Our new book, telling Whys and Wherefores of Poultry Profits—Why Ertel machines make most for their owners; how hatches are uniformly over ninety per cent with our machines; how we pay freight and why our prices are lowest—will be sent you free.

You owe it to yourself to learn the vast difference in results between Ertel Incubators and others. Please say whether interested in large machines or a small outfit.

GEORGE ERTEL CO., QUINCY, ILL.

REAL PROFITS Proved in Poultry

Guaranteed best hatcher is Cyphers Incubator proved so by beginners, experts and Agricultural Experiment Stations. Write to prove it by our

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INVINCIBLE HATCHER

Guaranteed to hatch every fertile egg. Guaranteed to batch more healthy chicks, with less labor, at less cost than any other incubator. You take no risk. A genuine free trial in your own home—you need send us no money. Special combination offer, Incubator and Brooder $7.15. Brooders $3.25 up. Very low prices on all supplies. Get 224-page, 1908 Catalog. Free. Write today.

$4.00 UP

THE UNITED FACTORIES CO., Dept. 49X, Cleveland, Ohio

You Haven't Got The Lowest Prices Until You Get Mine

I quote you the lowest prices on the best Incubators and Brooders. I know how to build them.

Miller Pays Freight

IDEAL Hot-Air and Hot-Water INCUBATORS and BROODERS are made to give best results. Send for my handsomely illustrated free book, "Poultry for Profit." Read my trial offer. See how I protect you.

J. W. MILLER COMPANY, Box 31 FREEPORT, ILL.

MODEL MONEY MAKERS

Poultry is a profitable crop on the farms where Model Incubators and Brooders are used. If you are not making big money on your chickens, write for my book. It tells how.

MODEL INCUBATOR CO.,
Chas. A. Cyphers, Pres.
341 Henry St., Buffalo, N. Y.

125 Egg Incubator and Brooder Both For $10

If ordered together we send both for $10 and pay freight. Hot water, copper tanks, double walls, double glass doors. Our free catalog describes them.

Wisconsin Incubator Co.,
Box 10, Racine, Wis.

Send for free Catalogue.

Hatch Chickens by Steam with the EXCELSIOR INCUBATOR Or WOODEN HEN

Simple, perfect, self-regulating. Hatch every fertile egg. Lowest priced first-class hatchers made.

GEO. H. STAHL, Quincy, Ill.

THIS IS THE LIMIT

$5.00 For a 50-Egg Hot Water BUCKEYE

Self-regulating Incubator. Guaranteed to batch every batchable egg. Both the Incubator and 50-Chick Brooder, freight prepaid east of Rockies, $9. 40 days trial. Send for FREE catalogue.

Buckeye Incubator Co.
Box B 28, Springfield, Ohio

RELIABLE INCUBATORS

Made on the right principle. That's why they hatch the right kind of chicks, in the greatest numbers. Send for our new big Free Poultry Book—the result of over 26 years' rich experience in the poultry business. Intensely interesting—instructive—profit producing.

Reliable Incubator & Brooder Co., Box 41, Quincy, Ill

40 BREEDS PURE BRED POULTRY. Fowls, Eggs and Incubators at low prices. Largest plant in the Northwest. Send 4c. for fine 76-page catalog. R. F. NEUBERT, Box 837, Mankato, Minn.

SUBSCRIPTION PRICE

One Year (24 numbers) 25 cents

Entered at the Post Office at Springfield, Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, do not fail to say it is a **renewal.** If all our subscribers will do this a great deal of trouble will be avoided.

FARM AND FIRESIDE

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ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

Keep the young stock well nourished, for it is more economical to maintain than to build up an animal.

◈

Experiments show that corn alone makes the most profitable silage, provided it is fed with clover, alfalfa or cow peas in the dry form.

◈

In leasing land it is more profitable both to the tenant and to the landlord to have a long-time lease. Three or five years is well, but ten years is better.

◈

Water standing in the soil shuts out the air that is necessary in the preparation of plant food. Such soils must be drained before successful cropping can result.

◈

The quality of your products counts in the market. The grower of good things is in a class by himself and is not forced to reduce his prices in order to make sales.

◈

In an orchard that is tilled the plant food is more available and the moisture content is greater than in a sod-mulched orchard where other conditions are the same.

◈

The cheap and easy way of growing crops is not always the most profitable way. A little more labor expended or a proper fertilizer added may increase, and sometimes even double, the yield.

◈

As long as the present edition lasts, farmers can secure a free copy of an instructive bulletin on paints by addressing Prof. E. F. Ladd, Agricultural College, North Dakota. Ask for Bulletin No. 70.

◈

Before planting out an orchard or small-fruit garden write your state experiment station for a list of varieties that are best adapted to your locality. In this way you may save much useless planting.

◈

The first requirement of a successful farmer is interest and sympathy with the work. These will add to the power to observe accurately, and accurate observation leads to information. These three attributes you should strive for.

◈

Proper plowing will aid in restoring fertility to old lands that have been supposed to be exhausted. It admits air and moisture, and these two agents break up the soil particles and render the plant food available for the plant.

◈

You have attended the farmers' institutes this year and have come away enthused with the desire to try some of the methods there discussed for enriching the soil. Don't be satisfied until you have put into practise some of the new ideas.

◈

For correcting acidity in soils a ton of finely pulverized raw limestone is about equal to half a ton of burnt lime. The raw limestone is more bulky to handle, but has an advantage over the burnt lime in that it can be secured and held and used when wanted.

◈

The failure of corn to properly mature in many sections makes it doubly important that you test your seed this spring. Do this at once, in order that you may have time to secure seed elsewhere and test it, should your own prove of low vitality.

◈

It has been learned that the life of wood can be prolonged by dipping it in a creosote preparation. Shingles subjected to this treatment have been known to last half again as long as those untreated, and besides, beauty can be added to the house by using one of the various stains as a coloring matter in the preparation.

◈

It affords some pleasure to be able to look back over the records for the year and note the sources from which profits came; and there is some satisfaction, too, in noting the losses, and knowing that next year the unprofitable operations will be eliminated. The farmer who carefully records his transactions adds dignity to his labor and feels that he is really engaged in an occupation worthy of being called a business.

◈

POSTAL SAVINGS BANKS

Readers, you can give valuable aid in establishing a postal savings banks system in this country by sending a word in its favor to your senators and representatives in Congress. Simply write a few lines expressing your opinion on the subject to the two senators from your state and to the representative from your congressional district. Now is the time to act. Practically every important country except the United States has a postal savings banks system.

Senator Knox has introduced a bill for postal savings banks on the plan outlined by Postmaster-General Meyer. In brief, the bill provides for the establishment of savings banks at money-order post offices; accounts may be opened by any person of the age of ten years or over; accounts are limited to five hundred dollars; such savings banks shall receive deposits in even dollars, with one dollar as the minimum; two-per-cent interest is to be paid on deposits by the government, the accrued interest to be credited annually and thereafter made a part of the principal; such deposits are to be exempt from state and federal taxation, and are to be subject to the safeguards and preference provided by statute for all public moneys; and the Postmaster-General is authorized to place all postal savings deposits in local national banks at a rate of interest satisfactory to the Secretary of the Treasury.

There has been considerable opposition to the plan by certain narrow-minded banking interests, but without good reason, unless their short-sighted selfishness is to be considered superior to the interest of the people.

* * *

Senator Knox reports that he has found a decided change of opinion among senators who have heretofore unfavorably regarded a postal savings banks system. The indications are that the bill will pass the Senate without serious opposition. The trouble at present seems to be in the House. It is charged that Speaker Cannon, at the beginning of the present session, packed the House committee on post offices, and that the boast has been made that postal savings bills would be securely pigeonholed. A prompt expression of public opinion on this important measure in the interest of thrifty wage earners will thwart the designs of the reactionaries and secure action on it in the House. That's where your letters will be effective right now.

◈

TOBACCO TROUBLES

In his address of welcome at the third annual meeting of the Kentucky State Farmers' Institute, recently held at Frankfort, Governor Willson, having in mind the work of the night riders in the tobacco districts, spoke earnestly of the law and the necessity of its observance everywhere, and of the ruin and devastation that resulted when the law was recklessly violated. He said that the country people should be even more careful than the residents of cities in seeing that the law is obeyed, for in the cities we have but to step around the corner to find a policeman, while at some places in the country the residents are miles apart.

Three days later the institute adjourned with a feeling of confidence among the representatives that through organization and education the farmers of Kentucky will be able both to cope with the trusts and to restore order in the disturbed tobacco districts. May it be so. For more than two years the troubles there have been most serious, first in one locality, then in another. Plant beds have been destroyed, crops ruined, barns burned, and men intimidated, whipped and killed. Lawlessness and violence have prevailed unrestrained. Life and property have been at the mercy of the mob.

* * *

If we seek the cause of all this, we do not have far to go. Anarchy in the tobacco-growing districts is simply the flower and fruit of the American tobacco trust. The development of the tobacco monopoly is a black history of crime, in which fraud, deception, robbery, perjury, oppression and homicide are but common incidents. This development seems to have been guided by a sinister genius with remarkable ability for exploiting the public in every direction at the same time. While the tobacco trust was swindling the investing public and piling up stolen fortunes for a few familiar malefactors through consolidation, bond-issuing and stock-jobbing schemes it moved impartially against consumers, retailers and tobacco growers.

"According to all available information," says Col. Henry Watterson, "it has employed the tactics of the pirate, the pickpocket and the porchclimber in its efforts to crush out competition."

The consumers were bribed with coupons and cheated by the substitution of inferior stock in well-known brands. The retail dealers were squeezed by reducing the margin between the wholesale and retail prices fixed by the trust, degraded from independent merchants to hirelings, or driven out of business altogether. Just as soon as the trust had destroyed free competition among buyers of leaf tobacco the producers were at its mercy—and mercy it had none. The trust made the prices what it pleased, and it pleased to make them lower and lower year by year. In the famous districts of Kentucky where the prices had formerly been six to eight cents a pound for certain kinds, they were arbitrarily reduced to three cents a pound or less. And then the war was on. The direct way to peace is the dissolution of the trust and the punishment of the men who are responsible for its career of crime.

* * *

The Lexington "Herald" comments on the vicious methods of the trust as follows:

"And yet when one reads the account of the formation and conduct of the American tobacco trust, and realizes how it has been organized and is being conducted in violation of the fundamental principles of law and equity and morals; when one realizes how, through its efforts to control the cigar stores, individuals have been ruined by its unfair competition, and through its power to control the prices of tobacco whole communities have been thrown into a state of lawlessness and hundreds of families put into what is practical want, it brings a realization of the failure of our national and state governments to enforce the law against such organizations as this.

"From the members of the 'peaceful armies of invasion' who first warn in a courteous, but not pleasant, manner those who do not agree with their views in regard to the sale of tobacco, to the 'night riders,' who, under cover of darkness, apply a torch to the barn of their neighbors or commit assassination, the producer who violates the law is amenable to the ordinary criminal processes, and for the salvation of the civilization of the tobacco districts must be made to respect those statutes and be punished when they are violated. But for the past fifteen years such men as organized the tobacco trust, and through it have wrung from the American people millions of dollars by the evasion or violation of the law, have been immune from punishment, and the attempt of the individual growers to better their condition by violence affects in no way the profits of these men."

A Great Opportunity

Before the prices of FARM AND FIRESIDE are revised March 31st we are going to give every member of the FARM AND FIRESIDE family a chance to get his or her subscription extended a year without cost—thus saving money—and at the same time give each of our good, loyal friends an opportunity to show their appreciation for our efforts, and their interest in FARM AND FIRESIDE, by putting their shoulders to the wheel and doing FARM AND FIRESIDE a good turn. We have set aside *March 31st*—the last day before the prices are revised—as

Farm and Fireside Day

On this day we hope that every member of the FARM AND FIRESIDE family will send us *two* new subscriptions, at twenty-five cents each, to help us keep down the subscription price of FARM AND FIRESIDE. In return, we will send FARM AND FIRESIDE without cost for a whole year to any name you give us, or we will extend your own subscription a whole year from the time when it expires. No matter whether you have renewed your subscription or not, we hope you will not disappoint us on March 31st, for we want to feel that our loyal friends are with us.

We Are Counting on You to Help

How the prices of FARM AND FIRESIDE are changed after March 31st depends almost entirely upon the number of subscriptions sent us FARM AND FIRESIDE Day by our readers. If you and all of our other friends will each put your shoulder to the wheel and help, the benefit will be yours fully as much as ours. But to bring this about, each one must do his share. Tell all your friends how you are trying to help us. They will be glad to subscribe then to help you. We are counting on you, as one of our good friends, for two subscriptions March 31st. Please don't disappoint us.

Our Clubbing Offers

Among the most attractive are the following:

Poultry Keeper one year and FARM AND FIRESIDE *three* years, all for only fifty cents; Southern Planter and FARM AND FIRESIDE one year, only fifty cents; FARM AND FIRESIDE *three* years, Vick's Magazine one year and Green's Fruit Grower one year, all for one dollar; FARM AND FIRESIDE *two* years, Farm News one year and Holden's "A. B. C. of Farming," all for only fifty cents; FARM AND FIRESIDE *two* years, Successful Farming one year and Holden's "Successful Corn Culture," all for only fifty cents; and FARM AND FIRESIDE *three* years, and The National Grange, the new official grange paper, one year, all for only one dollar.

Of Curious Interest

Unique Fire Alarm

Here is an old and odd alarm that was once utilized to summon help to a village conflagration. Notice is now attracted to it from the fact that after it has swung in disuse for fourteen years, the village fire company has determined to again make use of it in preference to a large school bell that has been utilized as the town fire alarm during that period.

The little village of Winnetka, located on the north shore out of Chicago, was without any kind of a fire signal. One of its citizens, John Heath, then, as now, was a citizen of the place, and he occupied the position of master mechanic of the Northwestern Railroad. He cut a block out of the steel tire that had been used on a driver of a locomotive, shipped it to Winnetka, and the fire laddies hung it up in a tree on the school lot. Struck with a big hammer, the broken rim could

A UNIQUE FIRE ALARM

be made to resound with a startling clang, and it got the volunteer fire laddies out of their beds in short order. The first man to reach the tree after a fire was discovered did the hammering, and it didn't take very much hammering to rouse the whole village.

The firemen have recently determined to make use of the queer contrivance for its original use. In 1905 the company moved into an abandoned schoolhouse as its department quarters, and the school bell was used to sound fire signals, but it is known that the old wheel tire was much more effective in bringing quick responses, so it has been determined to erect a derrick and hang the big steel rim within reach of a hammer's blow, and in this way the well-known relic will be preserved until Chicago finally annexes the suburb.

A Gigantic Cactus

The accompanying illustration is from a photograph of a giant hedgehog cactus—probably the largest specimen ever found. The plant in question is a veritable mountain of thorn-covered pulp, and that it is well called a hedgehog cactus can be easily seen from the illustration. It is estimated to be twenty-five feet in height and about thirty feet in circumference and will weigh several hundred pounds. This plant contains a pithy substance, which serves Indians and desert travelers, as well as horses and cattle, with both food and drink, and this particular one is capable of satisfying more than fifteen famished men. Hedgehog cacti often prove a godsend to lost travelers in the deserts of Arizona and Mexico. The accompanying photograph was taken in Arizona. The thorns from cacti are often used by Indians as needles.

AN OLD-TIME GROUP PICTURE OF THE ULYSSES S. GRANT FAMILY

The Charter Oak Chair

In the State House in Hartford, Connecticut, may be seen a beautifully carved chair having an historical interest that makes it dear to the hearts of the people of Hartford and of the whole state of Connecticut. This is the Charter Oak Chair, so called because it is made of wood from the famous old charter oak in which Captain James Wadsworth concealed the charter of Connecticut in the year 1687, when Sir Edmund Andros, governor of New England and New York, went to Hartford to demand the return of the charter in the name of his master, King James II.

The old charter oak tree meant to the people of Hartford all that the old Boston elm meant to the people of Boston, and there was sorrow all over the city when the revered charter oak fell in a great storm on the morning of August 24th in the year 1856. At noon a funeral dirge and the "Dead March" were played, and at sunset the bells of the city were tolled in memory of the old oak tree. People came from all over the city to secure bits of the tree as relics. But enough was saved to make the superbly carved chair that is now shown to visitors to the State House.

When Royalty Dines

When it comes to eating the king has distinct tastes. So has the poor man. The difference lies in their ability to satisfy them. "Town and Country" interestingly discusses the customs prevailing in many royal households.

King Edward has arranged his meals in rather a curious fashion. At 9 A.M., eggs, cold meat, toast and tea are served in his study. Luncheon of three or four dishes is at two o'clock. At five o'clock there is tea with little cakes. At seven a light supper with cold meats, and lastly, about midnight, a serious supper with many French dishes.

At Austrian state dinners the menu is nearly a yard long, and a dish is scarcely placed in front of one before the court marshal taps his gold cane on the floor, and away goes the dish to make way for the next. Upon ordinary occasions the Emperor takes his meals alone. Neither butter nor sugar is ever allowed on his private table.

When their royalties of Russia dine without guests the dishes are of the most simple. The Czar, although a hearty eater, prefers simple food. When the repast assumes a ceremonial form the cuisine is of the most elaborate character. The chef's staff numbers over twelve hundred persons, and these include twenty-four officers of the mouth, fifty yeomen of the buffet, and one hundred and twenty chefs of the first, second and third rank.

Feeding the German emperor is no light task, and in spite of all that is said about the Kaiser's Spartan habits, there are few monarchs who keep more elaborate tables. He has no fewer than four chefs—a German, an Englishman, an Italian and a Frenchman.

Each of these chefs has his staff of assistants, while in addition there is an individual who may safely be described as sausage maker to the Kaiser. His Majesty is very fond of the huge white frankfurter sausage, and has a supply of them made fresh every day in his own kitchen. When engaged in maneuvring his army on a big field day, these frankfurters and bread, washed down with lager beer, invariably form the Kaiser's luncheon.

The dish dearest to the heart of the Kaiser is sauerkraut, served with sausages and bacon fried together.

The late King Carlos was not easy to entertain, and he had one royal trick which was not exactly becoming to a philosopher. Once his lip had touched a glass, that glass had to be replaced; twenty sips meant twenty glasses, with much waste of good liquor and twenty-fold work for the waiters.

King Carlos earned the reputation of being the hungriest of monarchs. His three chief meals were colossal and he could not exist without a snack every two hours.

He strolled into the bars and tea rooms when his hour struck, and it is even hinted that he was once seen in an automatic lunch room on a Paris boulevard gulping five-cent sandwiches, too hungry to endure the delay of chic restaurants.

The Shah of Persia uses a dinner service which is encrusted with precious stones, and the kitchen appointments at his palace in Teheran are valued at five million dollars. The Shah's kitchen is of marble with pillars of onyx, which give it the air rather of a banquet hall than the place where his elaborate dinners are prepared. The stove is of massive silver, as is nearly everything else.

King George of Greece has an extraordinary taste for mutton broth, which greasy compound figures at nearly every dinner given at the palace.

The private kitchen of the Sultan of Turkey is a veritable fortress, consisting of a small chamber situated to the right of the great entrance, and is guarded by barred windows and an armor-plated door. The cook officiates under the ever-watchful eye of the kelardjhi bachi, one of the most weighty functionaries in the Yildiz Palace at Constantinople; for the health, the very life, even, of the ruler, is at his mercy. When cooked each dish is fastened with red wax bearing the official seal of the kelardjhi, and remains hermetically closed until the seals are broken in the Sultan's own presence.

The Sultan is not a great eater, for he kills his appetite with the number of cigarettes he smokes, and he takes his meals wherever he happens to be. Scores of people from the kitchen follow the meal in procession into the imperial chamber, and often the kelardjhi is requested to taste some particular dish before the Sultan partakes of it.

LARGEST WINE TANK IN THE WORLD

For breakfast the Mikado is perfectly satisfied with a bowl of bean soup and a few other dishes, but his dinner usually appears in splendid style, in some twenty courses although he always denounces it as a useless extravagance.

King Leopold of Belgium is a most frugal man and the most particular as to his diet of all the monarchs. He rises at six and works until nine o'clock, when his early breakfast consists of a little bread and sweets, jam, jelly or marmalade, sometimes a little fruit and a cup of tea. His luncheon is still more simple, and quite often he eats no luncheon. His dinner in the evening consists of two courses, never more, prepared in the plainest manner, and he eats absolutely nothing after dinner.

The Largest Wine Tank in the World

The largest wine tank in the world is the one belonging to the Italian-Swiss colony, at Asti, Sonoma County, California. It has a capacity of half a million gallons of wine. On the outside it is constructed of cement, and rises about six feet aboveground, the rest of it being underneath. Some idea of its great size may be had from the fact that on its completion a dance was given inside of it. In the illustration a sort of ornamental cupola shows the exact center of the top surface, only part of the top being visible in the picture.

The Whys and Wherefores

Have you ever stopped to think why traveling boxes are called trunks? Well, in the days of William the Conqueror boxes for carrying money and valuables were made in a very primitive fashion, the lids being simply half the trunk of a tree hollowed out; hence the name. In an old Kentish church in England there is to be seen such a trunk, which is said to be the one in which the Conqueror kept the money with which he paid his soldiers.

Along this line "The Scrap Book" asks and answers very interestingly:

WHY are dignitaries saluted with a discharge of guns when visiting a port?

BECAUSE in days gone by a town or war ships fired off their guns on the approach of important and friendly strangers to show that they had such faith in the visitors' peaceful intentions that they didn't think it necessary to keep their pieces of ordnance loaded.

WHY do widows wear caps?

BECAUSE when the Romans were in England they used to shave their heads as a sign of mourning, and as a woman could not let herself be seen with a bald head, she made herself a pretty cap. Though the necessity for it has long since passed away, the cap still remains.

STANDISH MONUMENT

WHY are two buttons always sewed on the back of men's coats?

BECAUSE when every gentleman carried a sword, the sword belt was partly supported by two buttons placed in that very position.

The Miles Standish Cairn

One of the hundreds of interesting historical monuments in the vicinity of Boston, but one less well known and less often visited by tourists than many others, is the Miles Standish Cairn at Squantum, on the road from Boston to famous old Plymouth. The cairn stands on a point of land a hundred feet above the sea level, from which one gets a superb view of the harbor, away to the north.

The tower is cylindrical in shape, with a round top. It is built entirely of cobblestones, cemented together. The granite tablet set into the tower tells the purpose of the monument. The inscription reads as follows:

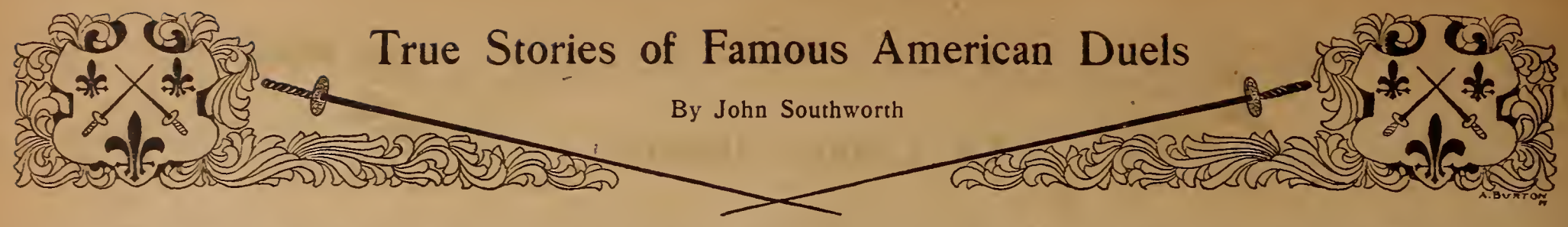
Captain Miles Standish with his men, guided by the Indian Squanto, landed here September 30, 1621. This memorial is erected by the Daughters of the Revolution, Commonwealth of Massachusetts, Quincy Historical and Bostonia societies, September 30, 1895.

This monument always interests school children who have been reading Longfellow's poems, as well as all who love to let their thoughts go back to those days when America was but a wilderness.

ONE OF THE LARGEST SPECIMENS OF HEDGEHOG CACTUS EVER FOUND

True Stories of Famous American Duels

By John Southworth



Skill in the use of the dueling pistol is no longer considered a necessary accomplishment of the American gentleman. The modern young man of spirit finds other means to soothe his wounded honor, and knows the sending of a challenge would be received as a joke and thoroughly ventilated in the newspapers. Such was the experience of a now-unhappy youth, who sought to revive the practise last summer, and who has not yet ceased being the butt of the merciless newspaper paragrapher.

Yet not more than fifty years ago the most prominent men in the nation were frequently called out to settle their disputes on the field of honor. The list includes soldiers and statesmen of the highest rank, and government officials, from congressmen up to the Chief Executive himself. Andrew Jackson to this day is best remembered as the "fighting President."

Hamilton and Burr

Any discussion of dueling in America must begin with the lamentable meeting between Alexander Hamilton and Aaron Burr, at once first and most famous of notable personal encounters on American soil. Hamilton and Burr fought in 1804, and the former lost his life, the most unfortunate thing, by the way, that could have happened to Burr, as his subsequent career proved.

The killing of Hamilton has been denounced as murder and advanced as still another argument to prove the utterly despicable character of his life-long opponent. Yet there are two sides to every story, and modern historians have found reason to believe that even Aaron Burr was not so black as his contemporaries painted him. It is certain, for one thing, that his killing of Hamilton was the natural culmination of a score of years of political persecution, and it must also be remembered that the politics of the time was no cleaner than now. In short, when one considers what Burr had to put up with, to quote Henry Austin, one of the foremost living authorities on this affair, this persecution was so vindictive that "the marvel is that this famous duel did not occur far sooner."

The feud between Hamilton and Burr extended over a period of twenty years. Hamilton had balked Burr's aspirations in every direction, from opposing him as United States Senator and as governor of New York, to the White House itself, for Burr undoubtedly would have been chosen President instead of Jefferson in the election of 1800, which, it will be remembered, resulted in a tie between Jefferson and Burr, and was thrown into the House of Representatives to decide. Small wonder, then, that after the particularly bitter spring campaign of 1804, Burr felt impelled to call Hamilton to account for some of his published utterances concerning him. Burr at this very time, be it remembered, was Vice-President of the United States. Hamilton failed to make a satisfactory reply, and the challenge followed on June 27th, and was accepted. The actual meeting did not take place until July 11, 1804, on the heights of Weehawken, a famous dueling ground across the Hudson River from New York City. Hamilton needed the time to finish a lawsuit and to arrange his affairs. Burr was likewise engaged. The night before the duel Burr wrote a long letter to his daughter Theodosia, and Hamilton, who seemed to have a premonition that he was to fall, made his will and left a long statement as to his conduct and motives in his dealings with Burr. In this he was very fair and admitted that his criticisms had weighed heavily upon his opponent. He wrote that he was opposed to dueling on principle, but thought it necessary to meet Burr, that his future political usefulness would not be destroyed. He also declared his intention to throw away his first and possibly his second shots.

The little grassy ledge just above the river's brink at Weehawken had been the scene of many similar encounters but none so fraught with tragedy to two such brilliant minds. On the eventful morning of July 11th, in all the fresh beauty of midsummer, Hamilton and Burr met in mortal combat. Hamilton's friend, a Mr. Pendleton, was his second; a Mr. Van Ness acted in that capacity for Burr. As Pendleton handed Hamilton his pistol, he asked, "Will you have the hair trigger set?"

"Not this time," was the magnanimous reply.

At the giving of the word Burr fired, and Hamilton started forward with a convulsive movement, reeled, and discharged his own pistol as he fell. Burr started to go to raise him, but his more cautious second hurried him away. Hamilton's first words on regaining consciousness were that he did not intend to fire at all. The wounded man lingered in great agony until two o'clock the next afternoon. The public sorrow at his death was only exceeded by the indignation against his slayer. Burr was indicted for murder in two states, but escaped to Washington, and, strange as it reads, was allowed to resume his duties as Vice-President. There does not seem to have been any great weight or remorse upon his mind. What can one think of the man who in the light of such a tragedy could write his daughter the following flippant letter:

"You have doubtless heard that there has subsisted for some time a contention of a very singular nature between the two states of New Jersey and New York. The subject of dispute is which shall have the honor of hanging the Vice-President."

Death of the Hero of Tripoli and Algiers

In 1820 occurred the fatal encounter between Commodore Decatur, the hero of Tripoli and Algiers, and Commodore Barron, who was in command of the ill-fated "Chesapeake" when she was ignominiously searched by a British ship just prior to the War of 1812. In the court martial of Barron that followed, Decatur was one of the judges, with the result that Barron was severely censured, deprived of his command and never reinstated in the navy. He charged Decatur with being the prime cause of all this. After a long controversy a duel was decided upon, and the two men met March 22d, at Bladensburg, a favorite dueling ground near Washington. At the first fire, at eight paces, both fell, seriously wounded. Decatur was thought to be dead, but he recovered enough to call to his opponent as they laid side by side, and to assure him that he had never been his enemy, while Barron hoped that they would be better friends in the life to come. Decatur died the next morning, while Barron, after months in the hospital, finally recovered. It is a curious commentary to note that they both were opposed to dueling on principle, and only yielded because they thought their profession of arms demanded it.

Andrew Jackson's Close Call

But foremost of all dueling Americans was President Andrew Jackson, hero of the battle of New Orleans, and winner of nearly a hundred duels, street fights and encounters of various kinds. Most famous of these was his meeting with one Charles Dickinson, brought about by an insult to his wife. The real story of President Jackson's romantic marriage has only recently been given to the public and will bear retelling. While yet a young man Jackson met a Mrs. Robards, who had been abused by her husband, and was subsequently led to leave her home under Jackson's protection. An honorable transaction in every way, but the brute of a Robards applied for a divorce, and it was generally understood that one had been obtained. Shortly after this Jackson and Mrs. Robards were married. To their great discomfiture they then found out that there had been a hitch in getting the separation and that they had been married several months before the decree was actually promulgated. So there was another marriage. But in spite of this Jackson was for a long time subjected to all manner of low jokes about his having married another man's wife, especially as he rapidly rose to prominence in public affairs.

There is a story that the duel between Jackson and Dickinson was an arranged affair of his political enemies to get Jackson out of the way. This man Dickinson was reputed the best pistol shot in the country, and the plan was to have him vilify Jackson's wife, be challenged, and as the challenged party, have the choice of weapons. His known skill with the pistol was to do the rest. Whether there is truth or not in this story of a conspiracy, the details worked out all right. Dickinson deliberately slandered Mrs. Jackson; in fact, did it more than once, on one occasion in public. Jackson was the owner of a fast horse which one day won a race. Mrs. Jackson was present, and as the winning horse came down the stretch she cried out in her enthusiasm, "See, he's running away from them all!" Dickinson stood near by, and turning, said insolently to some friends, "Yes, a good deal like his owner—ran away with another man's wife."

But Jackson was not yet ready to show his hand. He waited several months before he challenged, taking the time to put all his affairs in shape. He rather expected to be killed, but was determined to take the traducer of his wife along with him into eternity. The meeting finally took place May 30, 1806, at Harrison Mills, a day's ride from Nashville. Dickinson meanwhile had sent away for a special dueling pistol to practise with. He was as sure of killing his man as could be. On the way to the dueling ground he boasted of his skill to his friends, saying he was going to hit a certain button of Jackson's coat.

The men were to stand at ten paces, their position being marked by pegs driven in the ground. The word was to be "Fire—One, two, three, stop," and they were to fire any time between the first and last words. Dickinson was known to be so dexterous with the pistol that there was no possible chance of getting the start of him, and Jackson and his second, General Overton, agreed that it would be best to take the chances of a miss and let him have the first fire. Indeed, Jackson was willing to be shot himself if he could only get a shot in return.

Overton gave the word. "Fire—One." With the first sound from his lips, Dickinson's pistol was raised like a flash and he fired. He hit the button of the coat, as he said he would, but the bullet, with its force half spent and flattened, merely broke two of Jackson's ribs. The future President staggered, and then stood as firm and straight as a hickory sapling. He had not fired. It was his shot now. Realizing his danger, Dickinson with a yell started away, but Overton stopped counting long enough to cock his own pistol, and ordered him back to his peg. With a shudder of fear he obeyed. He was taking his own medicine. He was caught in his own trap. He knew he was about to die, but he stood up like a man. It was the only thing he could do.

Jackson with a face as cold and determined as death, slowly raised his pistol and took deliberate aim, as though he were firing at a log of wood.

Now he was ready to fire, but the hammer caught at half cock. His second stopped counting long enough for him to get ready again. These were indeed moments of mortal agony to the doomed Dickinson. Once more the pistol was deliberately raised. And this time it did not miss fire. As Jackson pulled the trigger Dickinson fell forward on his face, shot to death.

Jackson's wife was avenged.

"I would have killed him had he shot me through the heart," said Jackson afterward.

The Bowie Knife as a Weapon

It is said of Colonel Bowie, of Bowie knife fame, that when he died beside Crockett in the defense of the Alamo, he had previously killed about thirty men in duels and hand-to-hand fights. One of his picturesque encounters was with a Spaniard whom Bowie had shot and wounded in the leg so that he could not stand. He was still eager to fight, however, so Bowie agreed to a duel with knives, each man to be strapped opposite each other on three-legged stools. At the word Bowie with a quick thrust of his favorite knife put the foreigner out of the fight. Bowie was very partial to this knife of his. "It is better than a pistol, for it never bends nor breaks, and it never misses fire," he would say. He told his old friend "Davy" Crockett, in explaining the good points of his murderous weapon, "You can tickle a man a long time in the ribs with this before you make him laugh."

Aged Congressman Cilley a Victim

There was a particularly regretable duel on the old Bladensburg grounds in 1838 which quite effectually gave the practise a black eye forever in official circles. An aged congressman named Cilley resented in a public speech some editorial attacks made on Washington society by the New York "Courier and Enquirer," at that time owned by General Watson Webb. A Mr. Graves, of Kentucky, a friend of Mr. Webb, promptly called on Mr. Cilley with a challenge from the aggrieved editor. This Cilley refused to notice, but when Graves offered him one on his own account he accepted. They fought with rifles at eighty yards. Three shots were fired, and neither was hurt. The seconds then wished to stop the affair, but Graves persisted, and at the next exchange of fires his aged opponent fell, shot through the heart. This was the last duel fought at Bladensburg, so great was the outburst of public indignation.

Muzzle to Muzzle

The most ferocious meeting that ever happened on these historic grounds was between Col. John M. McCarthy, a famous duelist of Virginia, and a Mr. Mason. Mason had made some objectional remarks about McCarthy, who was his uncle, and when they next met on the street the nephew's ear was sliced off by the irate uncle's pocket knife. A duel followed. The nephew wanted to fight with dirks, but the Colonel refused, and in return proposed that they join hands and jump from the dome of the Capitol. They finally compromised on shotguns loaded with buckshot, and muzzle to muzzle. When they fired, most of Mason's charge struck the stock of McCarthy's gun, the rest entering his body. The top of the nephew's head was blown off, but the uncle recovered.

Settling Slavery Differences

A famous affair of honor in the Far West was Senator Broderick's duel with Judge Terry of the California Supreme Court. This took place in 1860, when feeling still ran high over the slavery question. Broderick, though a Democrat, was against the extension of slavery, and was the leader of that faction of his party. Judge Terry led the other side. There were many party fights over their differences, and before meeting Terry, Broderick fought a bloodless affair with a Doctor Gwin. This took place near San Francisco, and after its happy termination, a mounted messenger was despatched to Gwin's home to tell the story of the fight.

"How many shots?" asked the lady at the window when the breathless messenger had announced his errand.

"Four," was the reply.

"Any one hurt?" was the next question.

"No."

"Humph! Pretty poor shooting," remarked the lady, as she closed the window.

In his affair with Terry poor Broderick was not so fortunate. The duel was fought in the presence of about a hundred witnesses on a farm near San Francisco, and Terry brought down his man at the first fire, mortally wounded.

Notable Bloodless Affairs

By this time dueling in the North was in complete disrepute, so when Brooks, the hot-headed Carolinian congressman, publicly caned Charles Sumner, the Abolition senator from Massachusetts, the latter did not feel himself at all impelled to send a challenge.

Other notable encounters of more recent occurrence that may be mentioned were James Gordon Bennett's meeting with Frederick C. May, General Albert Gallatin Lawrence's bloodless duel with Baron de Kusserow, of the German legation, and the funny affair between a Mr. Schott and a Mr. Willing, of Philadelphia. Schott was slightly hurt, and a local newspaper paragrapher celebrated the whole affair in rhyme as follows:

Schott and Willing did engage in duel fierce and hot.
Schott shot Willing willingly, and Willing he shot Schott.
The shot Schott shot made Willing quite a spectacle to see,
While Willing's willing shot went quite through Schott's anatomy.

Lincoln as a Duelist

Speaking of funny duels, most noteworthy of all was the affair in 1842 between Abraham Lincoln and a fellow-politician named Shields. This was in the early part of the future President's career—in fact, before his marriage. Shields was a good deal of a braggart and had been made the butt for some of Lincoln's fun, so he felt himself impelled to issue a challenge, and Lincoln, looking upon the whole affair as a joke, as promptly accepted, naming broadswords as the weapons to be used. Lincoln also prepared the following bloodthirsty list of specifications and regulations for the duel:

First—Weapons: Cavalry broadswords of the largest size.

Second—Position: A plank ten feet long and from nine to twelve inches broad to be firmly fixed on edge in the ground between us, which neither is to pass his foot over, on forfeit of his life. Next a line drawn on the ground on either side of said plank and parallel to it, each at the distance of the whole length of the sword and three feet additional from the plank; and the passing his foot over such line during the contest shall be deemed surrender of the contest.

The whole county was aware of the coming encounter and seemed to agree with Lincoln that it was a good joke, and on the appointed day there was quite an assemblage of spectators gathered to accompany the contestants to the scene of battle, which was to be on the opposite side of the Mississippi River from Alton. Lincoln and Shields with their seconds were ferried across the river, while the spectators, for lack of boats, had to stay on the other side. The dueling ground was safely reached, and all preparations for the fight were completed, when through some mutual friends the quarrel was patched up. And a very lucky thing it was for

[concluded on page 21]

THE IMPOSTOR---By Frank E. Channon

Synopsis of Previous Chapters in February 25th Issue

CHAPTER XVI.—CONTINUED

AND then followed the impressive marriage service of the Holy Greek Church, in all its beautiful simplicity. When the clergyman came to the question, "And who giveth away this woman to be the wife of this man?" the Count Benidect replied clearly, "I do."

"And you, Amos Edward Jackson, do you take this woman to be thy lawful wedded wife? Wilt thou swear to live together after God's ordinance in the holy estate of matrimony? Wilt thou love her, comfort her, honor and keep her in sickness and in health, and forsaking all other, keep thee only unto her, so long as ye both shall live?" the priest continued.

"I will," answered Amos.

Then came the same questions addressed to the woman, and the same quiet "I will."

Then presently the short service was over, and the "God bless thee both!" of the priest given, and Amos and Edna arose from their knees man and wife.

"My children," the old man continued, "I have heard your voices, but I have not seen your countenances. It was to be thus. I know not the reason of this; I do not seek it, but I charge you both that you live by the contract which I have here solemnized, both together so long as ye shall live."

He was gone. Donnaly conducted him to the waiting carriage, and he was driven away, and the participators in this most singular marriage service sought their way blindly from the room.

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CHAPTER XVII.

THE ABDUCTION

A FEW days after the secret marriage, Amos took his initial flight in his "Clipper." It was not an entire success, owing mainly to the refusal of some of the propeller shafts to work, but the "Clipper" did fly, although not properly under control. After a fifteen minutes' sail the King inventor returned to terra firma. The ascension was made as privately as possible, but despite the fact, a great many people witnessed it. Mirtheium was decidedly interested in its King's experiment.

The next day great success was achieved. The faulty propellers had been repaired, and for nearly an hour the King navigated his machine in the clouds. Undoubtedly the "Clipper" was a success. A speed of over thirty miles an hour was made dead against the wind. Amos was much elated, and nodded to Donnaly with a "I told you so" air.

The two friends returned to the château arm in arm, talking over the flight and its lessons.

"I am going to take Edna up to-morrow, if she will come," he confided. "Good-by, old man, I'll see you this evening."

He made his way toward the Queen's apartments.

"Where is Her Majesty?" he inquired of an attendant.

"She left the rooms a short while ago, Your Majesty, in company with her waiting lady. It was at Your Majesty's own request; she received word from you to join you in the grounds."

"Nothing of the sort," replied Amos abruptly; "I sent no message to her."

"I beg Your Majesty's pardon; I was so informed."

"You were misinformed, then."

He entered the Queen's suite. The same story was told him there. His consort had received a verbal message from him to join him in the grounds to witness the ascension. It was brought by a palace servant.

Amos seated himself in her waiting room, while servants were despatched to find her. They came wandering back by ones and twos; the Queen was not to be found; neither was her lady in attendance.

"She has probably gone to the shrubbery at the far end," suggested Count Benidect.

"Let us go ourselves," said the King.

They walked rapidly across the green lawns, and searched the woods at the rear. Not a trace of the Queen could they find. Then suddenly Amos stopped. The next moment he was bounding forward, and tugging frantically at the form of a woman lashed to a tree in the dense shrubs. It was the Queen's companion.

He whipped out his knife. He cut the cords that bound her. He wrenched the gag from her mouth.

"Where is your mistress?" he shouted fiercely.

But the poor girl was unconscious. She fell in a limp heap, as he cut her free. In an instant he had raised her up and started on a dead run toward the château. He scarcely felt her child-like weight.

"The doctor!" he shouted to a crowd of gaping servants. "Quick!"

In a few moments the court physician was at his side. He quickly administered restoratives, and slowly the girl opened her eyes.

"The Queen—where—where is she?" she gasped.

"That's what I want to know! Tell me, quick!" ordered Amos.

"I—I don't know; I—I cannot tell; she—she was seized; we both were; we—we went in search of Your Majesty—we could not find you—we—we went toward the shrubbery, and entered—we were attacked from behind—I did not see—see—"

She lapsed into unconsciousness again. In vain the physician endeavored to restore her; it was useless.

The King left him working over her, and sprang toward the château. He brushed aside the fast-gathering crowd of officials and ran toward Donnaly's room. His chum was coming to meet him.

"I know! I have heard!" he cried. "Don't waste words. Tell me quick, where is Rudolf?"

"Rudolf! Rudolf!" echoed Amos blankly.

"Yes, Rudolf. He is not in his rooms; he is gone!"

"The devil!" cried the King. "Sure?"

"Certain. I've just been there. The rooms are empty; he has broken his word, his parole; he—"

But Amos waited for no more. He dashed on to see for himself. It was too true. The Duke was gone!

Then the hideous truth flashed through his mind. His bride was stolen. The Duke had abducted her.

"Good God!" he muttered, as he wiped the sweat from his brow. Then in a second he was all action again. "My horse! Have it ready!" he ordered crisply.

"Easy, take it slow, old man," cautioned the secretary. "Let's get some plan first. Here, Count, what do you say about this?" But Benidect was too slow for them. "Send the chief here," ordered the secretary. "We must get some clue first. We can't follow without a trail."

In hot haste the ground around where the girl was found was examined. There were signs of a struggle; the torn portion of a woman's dress; many footprints, and a little further on the unmistakable imprints of the feet of three or more horses, that had been tethered to a tree.

That was enough for Amos.

"My horse! Bring it along!" he ordered again. "The secretary's, too! Jump lively there!"

"They can't understand a word you say, man," said Donnaly savagely. "You're talking English. Cut it out. Don't lose your head!"

He gave a few short orders.

"Come on," he continued, taking the King by the arm. "Get into the house; get fixed up; stuff some cartridges in your pockets; bring your Winchesters along; I'll get my Colts. Six men from the light hussars will be here in five minutes."

He hustled his chum into the château. In a few minutes they were out again and mounted. There was an ugly look on Amos' face. It brooded ill for the man who crossed him now. The secretary, cool, calm and collected, was arranging details of the search and pursuit.

"This may be a false trail," he said. "The Duke is foxy, or I'm very much mistaken."

"No," said Amos decidedly, "this is it; there's no doubt."

"I'll make sure by sweeping the country on either side, anyway."

"All right; that can do no harm."

Count Benidect had recovered his composure somewhat by this time. "He will probably make for the mountains," he said. "The Casse—his party are strong there; he has allies there."

"We'll get the abductor!" roared the infuriated King.

"It may require troops to dislodge him if once he gains the mountain fastness," warned the Count.

"If I can but get to him! If I can but face him!" muttered the King. The lines of his face were hard and drawn. The muscles played up and down like summer lightning. His eyes ate up the crowd before him in their intensity. He was burning with impatience to be up and away.

"Ready, then, come along."

They vaulted into their saddles, and were galloping before the people realized they were mounted. As they reached the high-road they came upon the chief and some of his men.

"They have taken this direction, Your Majesty, there is no doubt; the trail shows plainly," he announced, as he saluted.

"Follow us," ordered Donnaly to the half-dozen troopers, and the party moved smartly down the road, the sabers of the soldiers jingling merrily as they trotted along. Amos, all impatience, could scarce wait, but his better sense told him it was madness to urge his horse now; he might require speed later.

"What?" he cried, looking around. "Ah, that's a good idea, Donnaly!" The thoughtful secretary had supplied each trooper with a spare mount. A couple of servants brought up the rear, each with a led horse.

"We may require them," said Donnaly as they jogged along.

The lieutenant in charge of the men spurred up to the King, and saluting, said:

"Your Majesty, we have no trail here, but I am taking it for granted that they passed this way, for the ground on either flank is too heavy to permit of fast traveling. It is most probable that they at least went as far as the Cu Mountain road; we should be able to locate the tracks again there in the softer soil."

"Very good, lieutenant. Guard against any surprise; they may be stronger in numbers than we suppose."

"I have two men in front as an advance guard, with a sergeant in the rear, and a man on either flank; we are twelve strong, excluding Your Majesty and your secretary."

Twenty minutes' sharp trotting and they were at the Cu Mountain road. The high-road continued on its way to the little fishing village of Nescombe on the other side of the island, but was crossed by a rough mountain path, which led away in sharp turns in many dips and rises, toward the great smoldering volcano "Cu," whose smoke and vapors could be seen rising in hazy mists in the distance. The intersecting country was low and marshy, with small lagoons and muddy lakes dotted here and there. Treacherous bogs abounded on either side of the narrow trail.

One of the troopers in front came dashing back.

"This way, sir!" he reported, saluting smartly. "The tracks are very plain."

"Left wheel!" ordered the lieutenant. "Single file."

The men changed formation, and trotted carefully along the narrow path, the King and his secretary now, at the officer's request, in the rear. The flank troopers had rejoined them and formed a rear guard with the sergeant. The advance guard still rode two hundred yards to the fore. Now and again one galloped back to report.

"There are plainly the tracks of six horses, sir," the man said on his next turn.

"We can handle them," nodded the lieutenant gruffly.

And now the ascent commenced. The marshes died away on either side, and a broad, boulder-strewn plain stretched out in all directions, ascending gradually toward the great mountain, with its smoldering summit. Huge slabs of lava and basalt obstructed their progress; the pebbles and small stones rolled under the horses' hoofs and made the going uncomfortable. Not a sign of the fugitives could be seen.

The troopers fell away in all directions, scouring the country.

"We must trap them sooner or later," said the lieutenant.

"They had an hour and a half's start," remarked Donnaly.

The King, glum and stern, trotted savagely along. Now and again his hand stole to his hip pocket.

As the party crept nearer and nearer toward the peak, two men swept completely around it, and rejoined their comrades.

"Dismount!" ordered the officer as the steepest part of the ascent commenced. The King and Donnaly followed, leading their horses.

"Care, now!" cautioned the lieutenant. "If Your Majesty is determined to follow us, you had best leave your mount and take advantage of every bit of cover."

He had scarcely uttered the words, when a shot rang out on the heavy air, and a cloud of lava dust sprang up a couple of yards behind.

"Down! Down!" shouted the officer.

A horse sprang high in the air, and with a snort of pain, broke away from the man leading, and dashed off down the hill. A dozen shots rang out in quick succession. One of the men whizzed around with a smothered cry, and dropped, writhing with pain.

"Hold your fire until you see them," came the order. "Steady now!"

The troopers crept cautiously forward on hands and knees.

Suddenly the sergeant to the right of the King fired. A man high above them leaped into the air with outstretched arms, then fell prone. The King's and Donnaly's rifles spoke almost simultaneously, then from the little semicircle of crawling men, "ping! ping!" came the sharp reports, as nearly every man drew trigger. Tiny clouds of dust arose in spots from the rocks above, and a cry or so of anguish. A man on the right of the advancing troops pitched heavily forward, and lay still.

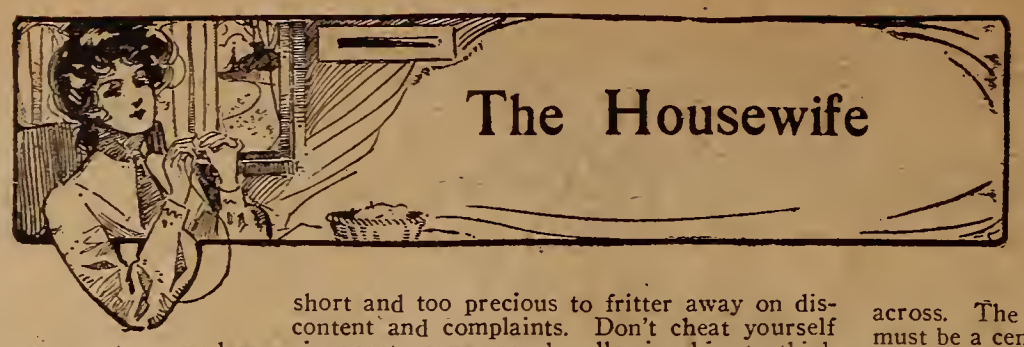
"We must rush them in a moment," muttered the officer.

Then came a dramatic climax.

The tall form of the Duke Rudolf leaped to the topmost boulder. In his arms he clasped a girl, white and trembling. For a brief moment they stood silhouetted against the sky line, amid the drifting vapors and

[CONTINUED ON PAGE 21]

"The King sought nothing—nothing but one man, and him he found"



Think It Over!

BY HILDA RICHMOND

Most unhappy looked the young matron as she related her troubles to a city friend. "Of course I knew John was a farmer when I married him, but I never dreamed that I couldn't persuade him to move to town. Here we are slaving our lives away on this lonely farm, and keeping the children from town advantages, just because John is too obstinate to give up farming. It just breaks my heart to see the little ones trudging away through the mud to a country school that doesn't amount to anything, when they might be learning in a good one. If John would have a sale, we could get enough out of the machinery and stock to buy us a home in town, and I know he could find work in a factory or somewhere. They are paying two dollars a day for workmen at the Eagle Mills, and haven't enough at that price."

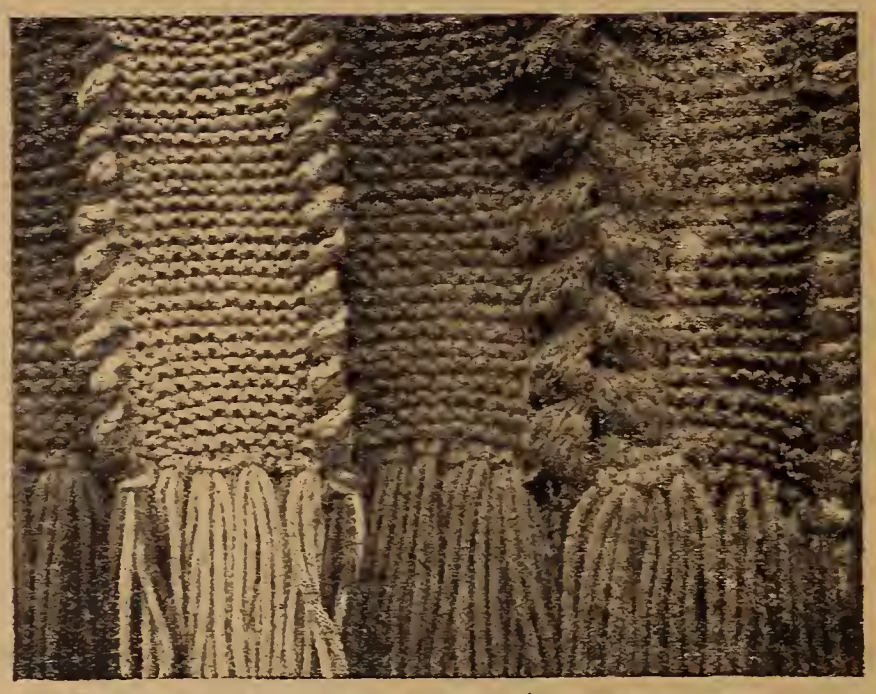
The friend tried to comfort her by telling her that even two dollars a day went only a short distance in keeping a family of five as they were accustomed to live on a farm, but the young woman waved all objections lightly aside. She knew she could succeed in town, but in the country it was not worth while trying. The city friend pointed out that they were not too far from town to attend church and do shopping, and that when the children were older it would be easy to let them drive back and forth to school, but all to no purpose. The countrywoman is hopelessly soured, and is rapidly making her husband soured and discouraged by her constant complaining.

All over the country there are young women getting ready to be married at this season to young countrymen. Wedding outfits are being prepared, new homes planned and new plans rapidly taking shape everywhere. Now if any young woman is saying to herself that just as soon as she is married she intends to persuade her husband to sell out and move to town, she had better break the engagement at once. It is much better to break a promise than to break up the sweetness and serenity of a home. "How can two walk together except they be agreed?" the Bible puts it; and how can success and peace and joy come to a home where husband and wife are pulling in opposite directions? The young man has undertaken farming as a life occupation, and knows no other, therefore the young woman should either work with him in his chosen labor, or else not unite her life with his. No man can do himself justice on a farm if he has a discontented wife and an unhappy home.

The history of all young married people who deserted the farm for town life, or the great majority of them, is about the same. The unskilled laborer used to the open air and free life of the farm is handicapped in shop or factory, and soon sinks to the plodding, dull workingman who is never a day ahead of the actual necessities of life. His wife finds that her many rosy dreams of town life are not realized, and too late she realizes that it would have been better for them to stay in the country. A working outfit of machinery, harness, tools and stock, that means the beginning of a successful career to the young farmer, goes for a song when put up at public sale, and an entirely new life must be taken up.

And it isn't true that the country is devoid of advantages. The country schools are turning out scholars every year who go at once to high schools in cities and colleges to do good work, and bring credit to the little red school houses from which they came. If the country church isn't all it should be in your opinion, lend a hand and help build it up, instead of standing off to find fault. Many a farm neighborhood has a club for women, where even the great Shakespeare is discussed and current literature read. The Grange helps along with the social life, and there is no law against social visiting, thimble parties, concerts and good times. The woman who would never be heard of in town society, because handicapped by lack of wealth, can move in the best country circles and enjoy herself if she will. The woman who reads about city receptions, with their decorations and refreshments, and concludes that life in the country is not worth living, is extremely foolish. With the beauties of the woods and fields at hand she can entertain with half the trouble and expense her city sister must go to, and her refreshments need cost very little, since she has the materials right at hand.

So think it all over carefully before you go into a partnership that you expect to manage exclusively. If nothing but town life will satisfy you and make you happy, by all means go to town to live, but do not plan to take an unwilling man with you. Life is too short and too precious to fritter away on discontent and complaints. Don't cheat yourself and some innocent young man by allowing him to think you are willing to share his home in the country, when you are all the time planning to make him discontented. Many young married women are doing that very thing this minute, but their homes are not happy and peaceful.



SUGGESTION FOR A COUCH COVER FOR A ROOM FURNISHED WITH HANDICRAFT FURNITURE

Delicacy is the Keynote of Square Shawls

In knitted square shawls one faces conditions quite different from those for scarf shawls. In the latter loose, fluffy effects are most eagerly sought, with the stitch worked out in a big way. With square shawls delicacy is the keynote. We aim at the beauty and the fine texture of the far-famed Shetland shawls, but in true American fashion attain it with less expenditure of time. We use fine wool—any one of the twofold yarns, or Shetland floss for a somewhat heavier fabric. True, some shawls still are made of threefold Saxony yarn, Germantown wool and Spanish yarn, but they are what might be called the "motherly" shawls—warm, thick, snug affairs that are solid and substantial enough, but not at all smart, nor are they in the least befitting the youthful American woman who grows younger with her years.

A Finish for Scarf Shawls

Mention of the fringe upon the ends of the shawl just described naturally brings us to a discussion of the best finishes for knitted scarf shawls as a class. Many borders are used, shell patterns and scallops and what not in endless variety, but the artistic instinct discards them all in favor of fringe. Centuries ago the latter was added as the final touch of coquetry, and time has taught that it is not unworthy, nor has it given us a finish with more fulness of beauty or less lacking in that awkward quality which lends itself so readily to badly knitted articles.

The Raspberry Stitch and Directions for Knitting It

The best stitch for knitted square shawls is the raspberry, and this statement is made without reservations of any kind, for surely there is nothing so lovely as the tiny berrylike knob which covers its surface, whether of coarse wool or fine. Yet it is undoubtedly loveliest when made of the finer wools, particularly of twofold Saxony yarn. Fine bone needles are used, secured as long as possible, and enough stitches cast on to give a width of thirty-six inches, or any other that is decided upon for the size of the shawl. The number cast on should be divisible by four with one additional stitch.

First row—Knit one, purl one, knit one all in the same stitch; then knit together the next three stitches. Repeat to the end of the row.

Second row—Purl three, put the yarn behind the work and slip one as though to purl, bring the yarn forward again, and repeat to the end of the row.

Third row—Knit together the first three stitches, knit one, purl one, knit one in the next stitch, and repeat to the end of the row.

Fourth row—Slip one, * purl three, put the yarn behind the work, slip one as though to purl, bring the yarn forward again, and repeat from *.

These four rows form the pattern, and they should be repeated until the work is square. Bind off.

THE RASPBERRY STITCH IS A FAVORITE FOR SQUARE SHAWLS

Couch Covers for a Man's Den

The masculine couch cover is larger than the feminine—one and three eighths yards wide by one and three fourths yards long—and differs from it in that it is striped, and also in coloring. It has already been seen that the feminine afghan is delicately toned, hardly more than suggesting a color. The masculine comes out boldly and decidedly.

Not that each is of one color, self toned. The majority, indeed, show some combination, but each component is well defined and strong. In the newest designs these bands of definite color run across, not up and down, making an impression very much at variance with the afghan of more ordinary build. The stripes, too, are narrower and more numerous than of old, so that not the least of the beauties of this new product is that it may be made of the odd skeins of wool which have accumulated. Where the old-fashioned afghan has five or seven broad stripes running up and down, the new has fifteen, seventeen or nineteen that run across. The number is always uneven because there must be a center band, at each side of which corresponding stripes are placed. For instance, in an afghan of shaded reds and greens a pale shade of the latter or cream white is used for the center stripe, then the reds and greens used for the others alternately, first a red, then a green, beginning with the lightest and always using the next darker tone until the very darkest shades appear upon the top and bottom edges.

A couch cover of this kind is joined with black, dark brown or green, with a border of the same. As to the method of joining, an unusual effect is produced by knitting the stripes together in the following way: Pick up all the stitches along one side of a stripe. Knit one, * thread over the needle, knit two together, and repeat from *. Make a second row like the first, then bind off, catching to the edges of the second stripe at the same time. The border should be crocheted. A simple scallop, made big, is the preferable edge, although there may be a finish consisting of three or four rows. But whatever the pattern selected, it must lie flat, because flounces never are mannish, even on an afghan.

Novelty and Variety in Potato Dishes

BY MARY FOSTER SNIDER

The potato seems such a homely every-day vegetable that the average cook troubles very little about variety in the manner of serving it. Baked, fried mashed or served simply in its jacket are the only ways in which it is known in many households. While each of these ways is most excellent, it by no means follows that they should make one entirely oblivious to the many other delightful dishes to be made with this favorite vegetable. Some of the most pleasing are given below:

Potato Balls—Mash about a cupful of boiled potatoes until perfectly smooth—it is even better to rub them through a sieve. Heat a small cupful of milk into a stew pan, let it get very hot, then turn in the potatoes, add salt, pepper, a little powdered mace to season nicely, and a generous lump of butter. Stir until perfectly smooth. Take it off the fire, stir in well one beaten egg, turn the mixture out on a floured pastry board, and when it is cool enough to handle, form into small balls. Brush these over with milk, and bake in a well buttered tin about twenty minutes, or until nicely browned.

Potatoes a la Creme—Cut the potatoes into quarters or small pieces, and steam them until tender, then let them dry off. Make a cupful of cream sauce with one tablespoonful each of butter and flour and one cupful of milk, season to taste with salt and cayenne, and flavor with a very little mace and grated lemon peel. Put the potatoes in a well-buttered baking dish, pour the sauce over them, sprinkle with buttered crumbs and a little grated cheese, and bake in a good oven for fifteen or twenty minutes until lightly browned.

Potatoes a la Donna—Rub a pudding dish with a clove of garlic, sprinkle it lightly with fine bread crumbs, and put in a layer of boiled potatoes cut into small thin pieces; season delicately with salt and white pepper, add some little bits of butter, and sprinkle with bread crumbs. Repeat this until the dish is full, having the last layer of bread crumbs and plenty of little bits of butter. Over this sprinkle grated cheese, and bake for twenty minutes in a quick oven. Serve with finely chopped capers sprinkled over the top.

Potatoes a la Maitre d'Hotel—Boil the potatoes in their jackets and peel them quickly. Melt two tablespoonfuls of butter in a saucepan, add one teaspoonful of minced parsley, the potatoes, salt and pepper to season lightly, and a few drops of lemon juice. Toss the potatoes about in the butter until very hot, then serve at once, with the butter poured over them.

Potato Soup—Boil and mash six large mealy potatoes until they are soft enough to be pressed through a sieve, with one onion boiled until tender. Add two quarts of white stock (milk may be used), thicken with some flour rubbed smoothly in a little butter, season with salt, pepper and celery salt, and just before serving stir in one half cupful of rich cream. Do not allow it to boil again.

A NEW STITCH FOR SCARF SHAWL—THE BAYADERE STRIPE

The Back Road

BY LESLIE FOWLER

My little garden spot is on the back road,
But my little garden spot is full of sun;
There's no such comfort and sweet peace
upon the highroad
When the long day is done.

There's a heap o' dust upon the highroad,
There's a lot o' folks a-passing by;
There are shadows long and cool upon the
back road
Where there's only you and I.

Temptation's always lurking on the highroad,
Nearly every man you meet is full of guile;
But your thoughts don't run to scheming
on the back road,
With the thrush and blackbird singing
all the while.

A man must toil to live upon the highroad,
Till his shriveled soul grows dry;
But there's work and life and hope upon
the back road
Where there's only you and I.

And as we pray God keep us on the back
road,
Help us to measure out our life in work
and love;
According as we've dealt upon the back road,
May He in mercy deal with us above.

Simple Effects in Embroidery

NEEDLEWORK is without doubt one of the oldest, if not quite the oldest, craft known to mankind, and embroidery or needlework of a fanciful or decorative species followed only a short time later. It is little wonder, therefore, that women of all ages and climes have been interested in this fancy stitchwork; it is a precious heirloom left to all, and appreciated thoroughly by the very large majority. The ordinary needlework is a necessity, however, while that of elaborating is a luxury, so that all too often the lack of sufficient

SIMPLE EMBROIDERY DESIGN TINTED WITH WATER-COLOR PAINTS

time binds one to the actual needs, and leaves unfilled the longing to make dainty, lovely bits of adornment for the home or wardrobe.

Much of the old-time embroidery was highly elaborate and intricate in detail, requiring day after day of steady work for its accomplishment, but it is no longer necessary for any one to do without a few pieces of their own handiwork simply for lack of long hours to bestow upon it. Even the busiest worker may find a few moments occasionally for pretty handiwork, and the simple designs and effective, easily managed stitches now employed so largely make it comparatively easy for her to carry out her purposes without the task becoming irksome.

If one is sufficiently well versed in the art of designing to draw individual designs, they may of course be as simple as one likes, but otherwise a trip to a nearby fancy-work emporium or a careful search through the catalogue of some distant fancy-goods dealer will, if properly managed, usually result in securing some such tasteful, effective pattern as is shown in the illustration, which may be worked in a few hours and with a small quantity of floss. The stitches are familiar and speedily carried out—buttonholing for the scallops, satin stitch for the disks and outlining for the remainder. In shades of green, brown and gold on the tan linen there is a richness and beauty about this simple design not often seen in work of far more elaboration.

Tastes vary greatly, but designs are also multitudinous, and what might appeal to the writer would perhaps not be so attractive as something else in the eyes of some readers. However, there are sufficient patterns for all, equally meritorious, if we eliminate the motley array of incongruous, gaudily colored pieces with their well-nigh interminable amount of work. Let every lover of embroidery who has denied herself its charm and delight for want of leisure hours take up some simple, graceful design and carry it out in quickly wrought, stitches of harmonious colorings, and see how truly she will be repaid.

The design in this case, like so many now on exhibition, is tinted in the colors to be used in its makeup, but this is not necessary to obtain good results. If one wishes, however, plain linen may be tinted at home, after the manner of stenciling, or by painting the stamped design with water colors, or with oil paints thinned with turpentine, being careful not to run out over the line of stamping.

The scallops in the present case are in reality little more than interlaced circles not quite complete—an ordinary motif, yet full of unique possibilities.

MAE Y. MAHAFFY.

Fancy Aprons

Has any one else tried making fancy aprons to sell? Sewing aprons sell quite readily at the holiday season. They can be made in the spare moments all through the year. Take large, fancy handkerchiefs, and cut one in two; sew one half on the bottom of a whole handkerchief, and stitch up on the sides and through the middle. This makes two pockets for fancy work. Cut a narrow band of India linen, and gather to the top, and the apron is completed. Three handkerchiefs make two aprons. Embroidery of odd lengths and insertion, also India linen, can be bought at the bargain sales, and worked up nicely in these fancy aprons, making a nice profit without much work.

MRS. GEORGE E. PROVINE, Illinois.

Soft Soap

A widow living in our town makes quite a bit of ready cash by selling soft soap. She makes up what soap grease she has herself, and then goes around to the neighbors and makes up what they have on shares. MRS. SARAH LONG, Iowa.

Quince Honey

From one quince bush I realized in cash fifteen dollars by making quince honey. It always has a ready sale at fifteen cents a small jelly glass. The glasses cost twelve and one half to fifteen cents a dozen. The rule for making is one grated quince to three tincupfuls of sugar. This makes about eight glasses, or one dollar and twenty cents, at a cost of twenty-five cents.

MRS. EMMA WOODWORTH, Indiana.

Thrifty California Woman

I plant cucumbers real early, and as soon as they are through the ground I dust each hill well with soot that I scrape out of my stove. I find a ready sale for the cucumbers at fifty cents a hundred. Most of my neighbors have orange groves, and they do not bother with vegetables, as they need all the water for the orange trees. I also make sweet, or unsalted, butter, for which I get forty cents a pound. In the spring I find a ready sale for sweet-potato plants at fifty cents a hundred.

MRS. EDITH SLAGLE, California.

Raising Bantam Chickens

Every spring I make pin money raising bantam chicks, which sell for twenty-five cents to one dollar a pair. When my father wants an extra hand to cultivate, I take the job, and he pays me seventy-five cents a day, and when fall comes I have enough money to run me through the winter, and also to pay my school expenses.

GRACE VERHINES, Oklahoma.

Pickles

Has any one said pickles? Pickles sweet, pickles sour, pickles large and pickles small. Cucumbers in brine, dill pickles, tomato pickles, apple pickles, watermelon pickles, mustard pickles and beet pickles. Chow-chow and catchup. Jellies, preserves and butters. Just plain canned fruit. Some one wants every good thing on the farm if put up in a tempting way, even horse radish.

M. W., Iowa.

Money in Turkeys

I raised pure-bred Bourbon Red turkeys, and sold over three hundred dollars' worth for breeders, besides having fifty dollars' worth of eggs ordered for spring. As my turkeys are tame and nest in the hen house, it takes but little of my time, and I never have to go after them at night.

MRS. F. W. SANFORD, Illinois.

Berries

We have a row of blackberries along our field. Each year we cut out old canes and mulch well. Two years ago we cleared sixty-four dollars and twenty cents, and last year twenty-eight dollars. We also sell raspberries, of which we have black, red and purple. We get more for the black ones than for the other kinds. We have also sold strawberries. They pay well, but the work is more tiresome. They must be picked when the grass is wet with dew, or else when it is very hot, so we did not like them so well.

M. W., Iowa.

Singer Talks

1. The Difference in Sewing Machines

¶ It is a mistaken idea that sewing machines are pretty much alike, when as a matter of fact there is a vast difference.

¶ There is but one machine that sews better than any other—and that one is the Singer.

¶ This is because the Singer idea is *distinctive*—every year shows improvement in that idea.

¶ This is because the Singer factories are not only equipped with tools and machinery better calculated to make good sewing machines than any other, but this equipment is unique and not to be found elsewhere.

¶ This is because a half century has been devoted to training and specializing men, each *to do one thing best* in sewing machine construction. The Singer's superiority—its lifetime-lasting value—does not appear on the surface.

¶ One machine *does* sew better than any other—and that *one* is the Singer.

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Miss Gould's Page of Practical Fashions

No. 1040—Box-Plaited Dressing Sacque With Fitted Back
Sizes 34, 36, 38, 40 and 42 inch bust measures

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The prices of Farm and Fireside are to be changed March 31st. Now is the time to renew your subscription if you want to get Farm and Fireside for several years more at the present low prices. Here is our offer:

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NOTE—This offer does not include the Roosevelt picture.

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Our pattern catalogue is a big, illustrated fashion magazine in itself. It contains designs for Miss Gould's latest Paris and London fashions, and page after page of simple practical designs. It tells how to dress the baby, what style of clothes to make for your young daughter, and gives you many helpful hints about your own wardrobe, too. We will send it to you for four cents in stamps. Address: Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

No. 722—Tucked Shirt Waist
Sizes 34, 36, 38 and 40 inch bust measures
No. 723—Skirt With Tucked Panels —Four Gores
Sizes 24, 26, 28 and 30 inch waist measures

No. 1094—Wrapper With Yoke
Pattern cut for 32, 36 and 40 inch bust measures (small, medium and large). Quantity of material required for medium size, or 36 inch bust, eight yards of twenty-seven-inch material, or five and three fourths yards of forty-four-inch material

No. 1110—Box-Plaited Waist With Revers
Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, four yards of twenty-seven-inch material, or two and three fourths yards of thirty-six-inch material, with one half yard of contrasting material

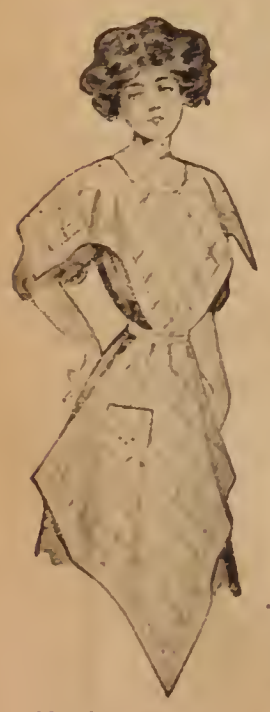
No. 1111—Tailored Shirt Waist
Pattern cut for 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 38 inch bust, four yards of twenty-seven-inch material, or two and three fourths yards of thirty-six-inch material

No. 1095—Misses' Housework Apron and Cap
Pattern cut for 12, 14 and 16 year sizes. Quantity of material required for medium size, or 14 years, eight and three fourths yards of twenty-seven-inch material, or six and one fourth yards of thirty-six-inch material

No. 1078—One-Piece Dress With Large Armhole
Pattern cut for 4, 6 and 8 year sizes. Quantity of material required for medium size, or 6 years, four yards of twenty-two-inch material, or two and one fourth yards of thirty-six-inch material, with one and three fourths yards of twenty-two-inch material for guimpe

No. 1079—Double-Breasted Loose Coat
Pattern cut for 4, 6, 8 and 10 year sizes. Quantity of material required for medium size, or 8 years, four and one half yards of twenty-seven-inch material, or three and three fourths yards of thirty-six-inch material

No. 1080—One-Piece Russian Dress
Pattern cut for 4, 6, 8 and 10 year sizes. Quantity of material required for medium size, or 8 years, four and one half yards of twenty-seven-inch material, or three and three fourths yards of thirty-six-inch material



No. 961—Jumper Apron

No. 706—Corset Cover, With or Without Fitted Skirt Portion
Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, two and one fourth yards of twenty-two-inch material, or one and three eighths yards of thirty-six-inch material

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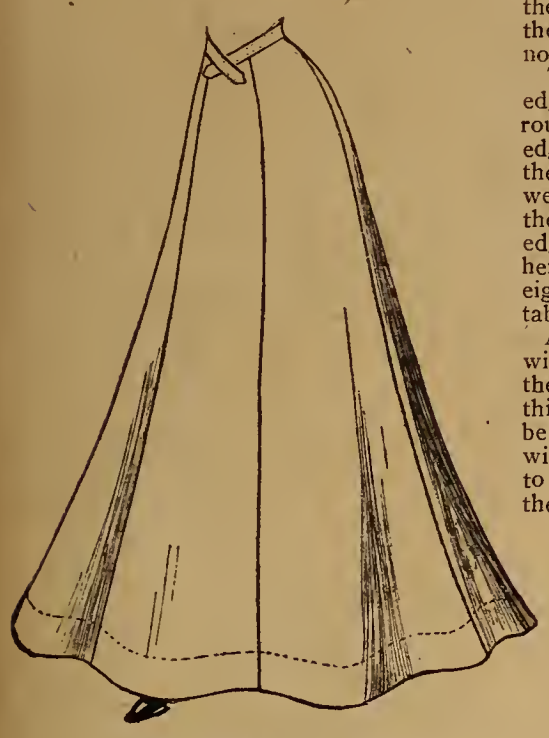
Miss Gould's Dressmaking Lesson

A New Five-Gored Skirt for Spring and How to Make It

While it cannot be said that plaited skirts have gone out of fashion, yet there is no doubt that gored skirts have come in. The newest gored skirts show the fashionable close-fitting sheath effect around the hips, and they have a graceful, though not too pronounced flare at the bottom. The dressmaking lesson this month tells all about the making of a smart, five-gored skirt. The illustration on this page shows



No. 1092—Five-Gored Skirt With Plain or Plaited Back

Pattern cut for 22, 24, 26, 28, 30, 32 and 34 inch waist measures. Length of skirt, 41 inches all around. Quantity of material required for medium size, or 26 inch waist, four and three fourths yards of thirty-six-inch material, or three and three fourths yards of forty-four-inch material.

This pattern may be obtained from the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City. The price is ten cents.

a five-gored skirt which may be made with a plain or plaited back.

The pattern, No. 1092, may be ordered from the Pattern Department of Farm and Fireside, 11 East 24th Street, New York City. The price of the pattern is 10 cents.

It is because this skirt is especially appropriate for stout figures that the pattern is cut in extra large sizes.

Plain skirts are, to be sure, easier to make than plaited ones, but there are many little points in the making that cannot be overlooked by the woman who does her own sewing if she would have a well-made skirt.

The pattern envelope contains five pieces. The front gore is lettered E, the side gore M, the back gore H, the band A and the belt X. These letters are perforated through the different pieces of the pattern in order that one piece may not be mistaken for another.

Smooth the pieces of the pattern carefully before placing them on the material. Place the edges of the front gore, the band and the belt marked by triple crosses on a lengthwise fold of the material. Place the side gores and the back gores with the line of large round perforations in each lengthwise of the goods.

The first step in making the skirt is to join the gores by corresponding notches. Finish a placket at the center back seam as far as the notch.

Form the inverted plait at each side of center back by placing cross on perforation at upper edge, and bring the long line of large round perforations over to meet the center back seam. Baste this plait, but do not press flat until you have tried the skirt on and know that it hangs properly. There are no darts in this skirt, so the fitting, if any, must be done in the front and side seams. When it is necessary to fit a gored skirt, take in just a little at each seam and you will not interfere with the shape of the gores at the hip and waist.

After the skirt has been properly fitted and the seams pressed, the plaits at the back may also be pressed. If you want them to lie very flat these plaits may be stitched three eighths of an inch in from the edge and about ten inches down from the belt. Join the skirt to the band as notched, and fasten at the back.

Turn a three-inch hem at the lower edge of the skirt by the lines of large round perforations. Baste around the lower edges of the skirt about one half inch from the bottom. If the material is wiry it is well to press the extreme lower edge of the skirt in order to have the turned edge perfectly flat before finishing the hem. Turn in the upper edge of hem three eighths of an inch. Place the skirt on a table and pin the hem up before basting it.

At intervals of ten or twelve inches it will be necessary to lay a tiny plait at the top of the hem which will look something like a dart. These little plaits should be pressed flat, and if the material is wiry they must be hemmed down neatly to have them lie perfectly flat. Baste the hem along the upper edge, and stitch. The hem should be again pressed before anything further is done to the skirt.

This skirt pattern, No. 1092, provides a belt which may be made from the same material as the skirt, giving it a strictly tailored finish. Use one thickness of tailors' canvas for an interlining, and cover it with material. Turn the edges of canvas and cloth together three eighths of an inch. Stitch as near the edge as possible, and two or three rows of stitching inside the first one to hold the edges flat and firm. Then line with silk, hemming the silk very finely, and only permitting the lining to come one fourth of an inch from the edge of the belt all around. This belt may be stitched firmly to the left side of the skirt, and drawn closely around the right side after the skirt has been fastened. Lap the pointed ends, matching the large round perforations.

When the plain back is desired the

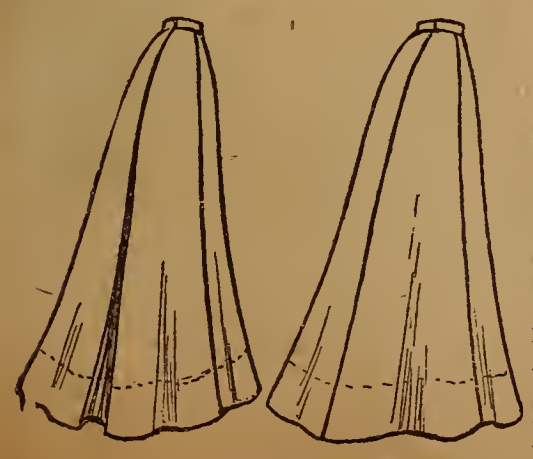
This is the Five-Gored Petticoat Which Can Be Made from Skirt Pattern No. 1092

back gore of the skirt may be cut off on the line of small round perforations. Finish a placket at the center back seam. Have the placket twelve inches long, and be sure to sew the hooks and eyes in the placket carefully, so they do not show.

Drop skirts or petticoats to be worn with spring and summer skirts should be made from the same pattern, in order that the seams in both skirts may come in exactly the same place. When the seams of a petticoat show through a skirt made of semi-transparent or sheer fabrics they interfere with the graceful lines of the outside skirt, and frequently spoil its effect. It is wise, therefore, to use the same pattern for both skirts.

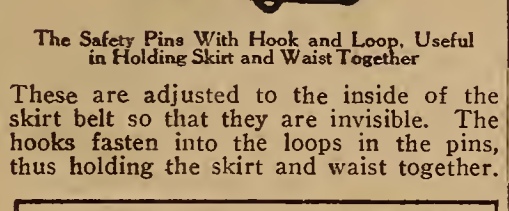
One illustration shows a ruffle-trimmed petticoat that may be made from Pattern No. 1092. Cut the petticoat off by the lines of large round perforations and turn a one-inch hem at the lower edge. This will shorten it evenly all around, and make the petticoat just one and one half inches shorter than the outside skirt.

For the ruffle, cut a strip of material fourteen inches wide and four and one half yards long. Turn an inch hem at the lower edge. Turn an inch heading at upper edge. Gather one inch from the top to form the heading. The ruffle when finished will be eleven inches wide. Arrange on the petticoat, bringing the lower edges of ruffle and petticoat together.



Two Views of the Skirt, Showing the Plaited and the Plain Back

The woman who does all her own sewing will find the circular skirt yokes, which she can buy ready made and in all sizes for 14 cents, most useful in making



These Skirt Yokes Do Away With Bands and Gathers Around the Waist

her short and long petticoats. These yokes are double, and are curved so that they fit over the hips without wrinkling. At the back they fasten with hooks and eyes. The petticoat is sewed in between the two thicknesses of the yoke, and in this way all bands and fulness at the waist are done away with. The yokes are muslin, and come in black and white.

Sets of safety pins are sold purposely for holding waist and skirt together. Four pins on a card sell for 9 cents. The safety pins with loops are fastened to the waist, of course, with the loop portion down. The other pins have pointed hooks.

The Safety Pins With Hook and Loop, Useful in Holding Skirt and Waist Together

These are adjusted to the inside of the skirt belt so that they are invisible. The hooks fasten into the loops in the pins, thus holding the skirt and waist together.

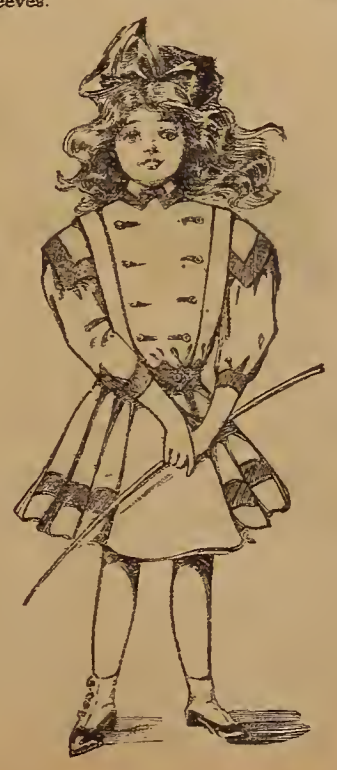
I want every reader of my fashion pages in Farm and Fireside to feel that she may come to me with all her little perplexing dress problems, and that in every way that I can I will help her, through a personal letter. If at any time you wish to know the prevailing fashions and the fashion novelties as seen in the big New York shops, just say so, and I will gladly include the information you require in my letter.

In regard to the two little dress conveniences illustrated on this page, I will send a personal letter to any subscriber of Farm and Fireside who wishes to know where they may be purchased. Send your letter, enclosing a stamped and self-addressed envelope, to Miss Grace Margaret Gould, care Farm and Fireside, 11 East 24th Street, New York City.

No. 1099—Plaited Military Dress

Pattern cut for 6, 8 and 10 year sizes. Quantity of material required for medium size, or 8 years, five and one half yards of twenty-seven-inch material, or four and one fourth yards of thirty-six-inch material, with one yard of contrasting material for trimming

This little dress will develop attractively in white linen with colored linen bands for the trimming. The waist is given a smart, broad-shouldered effect not only from the plaits on the shoulders, but the epaulette pieces which extend over the three-quarter puff sleeves.



No. 1099

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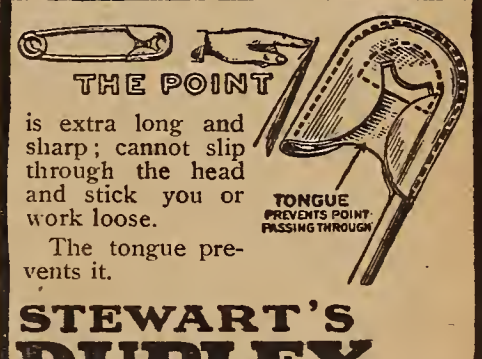

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The tongue prevents it.

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Department For Our Young People

The World's Poor Children

BY FELIX FAXTON

THIS is an age in which the needs of the children are considered as never before. Never was there so much done for the poor and helpless children of the world. Nearly every large city has some sort of a home or institution in which fatherless and motherless children, or children whose parents are unable to care for them, are cared for through the benevolence of others. But New York City can boast of the most elegant and thoroughly equipped home for the children of the poor of any city in the world. In the suburban district of the city is a home so artistic and elegant in appearance that it is supposed by strangers to be some fine art gallery or the home of some rich and exclusive club. It is really a beautiful home for the poor children. One of the New York papers, in referring to this superb home, said:

"If Oliver Twist had been led, without previous warning, into this new Home for the Friendless of the American Female Guardian Society, the shock of astonishment would, I am certain, have been dangerous. For half a century the society carried forward the same work in a place much nearer the heart of the city. Oliver Twist would have been surprised to know that the new structure and the ground on which it stands cost two hundred and sixty-three thousand dollars. He would have been thoroughly impressed by its imposing, massive style, for the house is made of stone, iron, oak and concrete, and is as free from danger by fire as the most modern office structure. Among those who have contributed liberally to this institution is Miss Helen M. Gould, and the home has no more constant visitor than Miss Gould, as she often comes to it three and four times a week. Miss Gould gave twenty thousand dollars toward the cost of the building, beside furnishing some of the interior furnishings."

This is indeed one of the pet charities of Miss Gould, and the little people who are cared for so tenderly here owe her a great debt of gratitude for all that she does for them. In the home may be found playrooms in which there are games and toys of every description. Many of these have been given by wealthy parents who have lost their children. There is a fine "gym" for both the girls and the boys, and bath rooms with tubs of the finest porcelain. There are shower baths and fully equipped schoolrooms, and the one hundred and sixty children who live in this delightful home sleep each in a snowy white bed. One of Helen Gould's gifts has been a beautiful music box, that the children are always wanting wound up, that it may run down while the music comes from it. Miss Gould also gave a phonograph that is a source of great pleasure to the children. There is a charming little park near by, and not far distant is a tract of uncultivated woodland that is more like the real country than any park can ever be.

The children who live in this palace-like home are many of them from the very poorest sections of the city of New York. Some are orphans. Others are worse than orphans, for they have been deserted by their parents. Some are fatherless, and their mothers are not able to care for them. Some of the parents pay a dollar a week for having their children cared for in the Home, but others enjoy all the benefits of the Home without money and without price. In the Home are a kindergarten, a manual-training workshop and classrooms of different kinds.

This Home is very beautiful, and everything that loving kindness can suggest is done for the boys and girls in it, and yet, after all, one feels the truth of the old lines:

"East, west:
Home's best."

Yes, the real home where there is the real family life, with father and mother and brothers and sisters, is better, humble though the home may be, than this palace-like building with all that the money of strangers can put into it. The boy or the girl who has a simple, humble home in which there is the real and loving home spirit has no cause to envy the boys and girls who live in this finely appointed Home with a big H. But it is a better place for most of the boys and girls who are there than the wretched places they have left behind them, places not deserving of the name of home.

◈

Ralph's Encounter

BY ADELIA A. ISAACSON, AGE FOURTEEN

MY FATHER once had a very intimate friend, who lived about two miles from his home, in the deep woods of the Sierra Nevada Mountains. They were together a great deal, and almost every time one of them went to hunt, the other went, too. But one day father's friend went to hunt alone, for my father was obliged to stay at home that day to assist his father.

As Ralph (father's friend) was walking along by a pond he heard a loud growl behind him, and turning, found himself face to face with a huge grizzly bear. He was so frightened that he flung his gun square at the bear's face, and fled. He ran almost half a mile before he stopped and climbed upon a large rock. He had run directly in the opposite direction from home, and would have to go back by the place where he had seen the bear. As he came near he did not hear anything, so going closer he was astonished to see the bear lying on the ground with the gun muzzle in his mouth. It had gone off and shot the bear in the mouth, killing him instantly.

◈

Curly Locks

BY RUBY M'CALL, AGE THIRTEEN

A LITTLE maiden named Helen, but called Curly Locks because of her clustering curly hair, was playing out in the yard with her brother Robert and their dog Rover.

Robert wanted to go to the railroad, which was not far away, but Helen did not. Robert, who was older than Helen, kept coaxing his little sister, until she finally consented to go. She would not go, though, unless Rover went with them.

The children were playing, when a fast mail train came along, and it killed poor Rover, who was sitting in the middle of the track.

This was very sad for the two children, who loved Rover, as he had been their playmate all their lives. They went home and told their father, who went to the track, took poor Rover's remains and buried them where the children could go every day. They both kept the little grave covered with fresh flowers in summer, and an evergreen tree was planted on it, which made it nice in winter. In years after, when both were grown, they remembered poor Rover's grave, and kept it nice both summer and winter.

Let this be a lesson for all children. Never yield to temptation, because it never leads to any good.

"CLEAR THE WAY, BUBBLES IS COMING"

◈

Teddy

BY DARRELL SCOTT MULFORD, AGE TEN

ONE Christmas night, as we were coming from Aunt Ruth's, a cat ran in front of us. It would run a little way, then lay down, and seemed to want to play with us. Just as we would stoop down to pet it, it would get up and run ahead of us again. When it came to our steps it turned in as if it had always lived there. Uncle Tom wanted to bring it in, as it was a cold night, but Aunt Kittie would not let him.

When Aunt Kittie was getting breakfast, she said to Uncle Tom, "Look out of the window," and there in the wood-house door sat Teddy, looking as proud as anything. We brought him in and fed him. When Uncle Tom went to work he put him in a chair, and he has stayed with us ever since.

Uncle Tom has taught our pet a good many tricks. Every one who sees him admires him. He weighs nine pounds.

◈

Story of a Homeless Kitten

BY LELA M. TUSCUS, AGE TWELVE

I WAS born in the summer of 1906, a little way east of Oakland, Ohio. One day, when I was just a little kitten my mistress' father come to make her a visit. While he stayed he took a delight in teasing us kittens. One day while teasing us a thought came to him to amputate our tails. He got his knife, and sharpened it a little bit (but it was still rather dull), and then came our turn. He caught us one by one, me first, and then went on with his operations. I stayed with the people for some weeks, for I was most too young to leave. One day my master had some business up a wide road, so he took me with him until he came to a large brick house, where he dropped me out of the buggy.

I was very much surprised at first, so I stood still, looking around, when I spied the house. I went to it, but there was a good many children there, and they teased me almost all of the time. I had been there but a few days, when, much to my delight, my new master took me away, and dropped me out by a large creek. I wandered around over the country for some days, getting what I could to eat (which was not much), until one Sunday evening I heard somebody calling "Kitty! Kitty!" Of course I hastened to the place from which the voices came, which was from the porch of a house near by. There I found a nice saucer of milk awaiting me, which I was very glad to see, for I was almost starved. This last place is where my home is at the present time. My keepers are very kind to me most of the time.

◈

The Settlement of a Pioneer Town

BY JOHN FULLER, AGE TWELVE

CAPTAIN WHITTAKER, of Buffalo, New York, was a wealthy lake captain owning two large sailing vessels. In the early thirties he set sail from Buffalo with two shiploads of merchandise. After sailing to Detroit, he gave orders to his men to sail north around the Michigan peninsula and south again until they came to a flag which he was to nail upon the shore somewhere near the southern end of the lake.

He followed the Chicago road from Fort Detroit to a place about fifteen miles west of South Bend, known in those days as Bootjack. Then he set across the county toward the lake.

When he came to the lake he found a suitable place for a harbor at the mouth of the Galien River. Here he nailed a flag upon a tree that stood near the shore. Then he came back into the country, blazing the trees as he went, so that the sailors would know where he was. He came into the country about six miles, to where a man by the name of John Talbot had a sawmill. Two or three log cabins stood near the sawmill, one of them occupied by Joseph Fuller and his wife and children. At this place he stopped to board until his sailors should come, which they did in about two weeks.

As soon as possible they commenced laying out a town at the mouth of the river. He called the town New Buffalo, in honor of his former home. The main street of the town he named in honor of himself, and it is still called Whittaker Avenue.

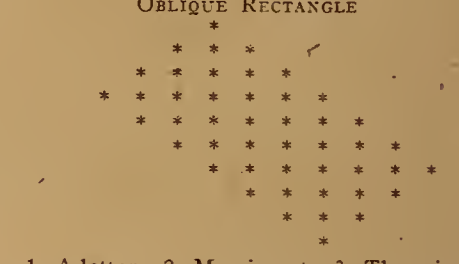
After he had unloaded his ships he began selling supplies to the settlers. He gave as a present enough calico to make a dress for Mrs. Fuller. The calico would have sold for thirty-seven and one half cents a yard.

Mrs. Fuller was my great-grandmother. She also baked the first white bread that was sold in New Buffalo.

◈

The Puzzler

OBLIQUE RECTANGLE



1. A letter. 2. Merriment. 3. The price of a passage. 4. The outside. 5. Closest. 6. Perfumed. 7. An arm of the sea. 8. Wet with tears. 9. Arid. 10. A letter.

RIDDLES OLD AND NEW

24. What is enough for one, too much for two and nothing at all for three?

25. What goes upstairs on their heads?

26. Down in the meadow stands a green house; inside of the green house there is a white house; inside of the white house there is a red house, and inside of the red house is a whole lot of little niggers?

27. What is it that has eyes and a tongue, yet cannot see nor talk?

28. What's high in the middle and round at both ends?

29. On the hill there stands a mill, around the mill there is a walk, upon the walk there is a key.

30. Why is the letter P like uncle's fat wife going up a hill?

31. Which is the oldest piece of furniture in the world?

32. If a thin man were to dress himself in a tall, fat man's clothes, what two cities in France would he resemble?

33. Why is the letter D like a sailor?

34. Why are chickens' necks like door bells?

35. What is it that occurs once in a minute, twice in a moment and not once in a thousand years?

36. What is the difference between a cloud and a whipped child?

37. Why is eating soup with a fork like kissing?

38. Why is a colt like an egg?

39. I went out walking one day, and met three beggars; to the first I gave ten cents; to the second I also gave ten cents, and to the third I gave but five. What time of day was it?

40. Why is it right for B to come before C?

41. What grows the less tired the more it runs?

42. When may a man be said to breakfast before he gets up?

ANSWERS TO PUZZLES IN THE FEBRUARY 25TH ISSUE

1. A debt. 2. Get wet. 3. A pretty woman. 4. A dead one. 5. Mississippi River. 6. One trains the mind and the other minds the train. 7. When its a little reddish (radish). 8. Because you never saw it before. 9. It's at the end of pork. 10. They both grow down. 11. In the dictionary. 12. They cell it, of course. 13. Grapes (gray apes). 14. Because she is something to a door (adore). 15. It has a head, tail and two sides. 16. One is missed from heaven and the other is missed from earth. 17. One licks with a stick and the other sticks with a lick. 18. Tanners. 19. Because she is hard to pair. 20. A wagon. 21. Shortest day. 22. Cabbage. 23. A glove.

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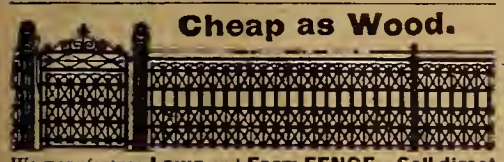

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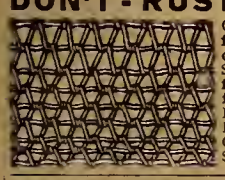

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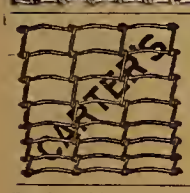

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To Weave Your Own Fence at 24c per rod ont of coiled hard eteel spring wire. WIRE AT WHOLESALE. Farm Gates. Catalog free—tells how to huild fence and why yon should use coiled steel wire.

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Box 29, Mt. Sterling, Ohio.

WANTED—1,000 CHAUFFEURS

and Repair Men. Our demand for professional automobile engineers exceeds the supply; calls for men of intelligence and mechanical bent, commanding $100 to $150 monthly, upon graduation. Resident courses $15 to $50. Home correspondence conrses in construction and repair, completed hy practical road and shop work at any of our branches or affiliated schools, highly snccessful. LOOK THIS UP.
Auto Schools of America, 1685 Michigan Ave., Chicago

CHICAGO SCHOOL OF MOTORING

is the most practical, thorough and oldest automobile school in America. For terms, etc., write the

CHICAGO SCHOOL OF MOTORING
1438 Wabash Ave., Chicago

The Impostor

[CONTINUED FROM PAGE 15]

smoke, then his deep bass voice rang out like a fog horn:

"Shoot if you dare! You will only kill her!"

As if by common impulse every man lowered his piece, and for a few seconds silence hung over the mountain top, broken only by the low rumblings of the fire within. Then, with a roar of wrath and anguish, the King sprang from the line and dashed up the last steep pitch.

Close upon his heels followed Donnaly and the troopers. The summit burst into flame, and the air hissed with flying bullets. Down went the troopers in ones and twos. Donnaly gave a gasp, and curled up, but the King, unharmed, with the lieutenant at his heels and three men behind, had struggled to the top. The Duke dropped his human burden, and leveled a revolver at his enemy, but Amos was quicker. Ere the trigger was touched, he knocked the weapon from Rudolf's hand, and closed with him. Twenty men sprang to the Duke's assistance. The lieutenant and his two men were up. They were overborne by sheer weight of numbers, but the King clung to his arch enemy with the grip of a bear.

"Shoot him!" hissed the Duke, struggling fearfully in the death embrace of his foe. But Amos was like a wounded lion. He cast the half-suffocated man from him, and emptied the five chambers of his revolver into the ring of men. He drew his saber and cleared a space around him, and for a brief moment he was master of the situation. But only for a moment! With a yell of defiance they closed in upon him. The shots came quick, and the slumbering fires beneath them growled and muttered, as if in anger at being disturbed. The struggle could not last. The King must be downed! He felt a stinging sensation in his left arm; high up in his thigh another; he grit his teeth and fought madly on. He would not give up. The Duke was up again; with his face distorted with rage, he closed in on the American. Beset on every hand, surrounded, wounded, bleeding, giddy, all seemed lost! And yet, with that intense resolve that can make a man sit his horse when dead, the King fought desperately on, refusing to accept defeat. The Duke had snatched a revolver from one of his men. With malice and black hatred painted upon his swarthy face, he crept nearer and nearer to his enemy. He leveled his weapon. He took careful aim. There should be no mistake this time. The King should die. With a triumphant cry he drew on the trigger; there was a flash and a report! But at the same instant a strong hand from behind smashed down the iron of death, and the ball buried itself at the King's feet. There was shouting, cheering, cries and groans; the rush and trampling of feet; the sharp words of command, and from the further side swarmed the left wing of troops in their blue uniforms. The abductors were outflanked and cut in two. Madly, fiercely, they fought on; there was hope for them yet. They sought to cut their way through to escape. But the King sought nothing—nothing but ONE MAN, and him he found. Rudolf, the fire bug, the abductor, his arch enemy! With an almost animal cry of rage, he caught the man again in his fearful grip.

[TO BE CONCLUDED NEXT ISSUE]

True Stories of Famous American Duels

[CONTINUED FROM PAGE 14]

Shields, when one considers that Lincoln with his enormous length of limb had about twice as long a reach as the other fellow. Still there is little reason to believe that Lincoln would have done him much injury. As he told a mutual friend, he had selected broadswords because he was afraid that if pistols were used some one might accidentally get hurt, while he was sure that with swords the little fellow wouldn't have the slightest chance to do damage to anybody.

A Duel That Made Friends

HENRY CLAY once had a duel with bluff old John Randolph, of Virginia. Clay fired and missed, and Randolph generously turned his pistol aside and fired in the air. They were firmest friends ever after. It is a pity more duels didn't end that way.

A Thing of the Past

SINCE 1860 the laws in the various states against dueling have been so vigorously enforced that the practise would have been suppressed even had public sentiment not been against it. Perhaps this is putting the cart before the horse, and it is because of public sentiment that the laws have been enforced, but it means the same thing anyway. One of the most remarkable of these laws is that of Mississippi, famous among dueling states, which makes the survivor of a duel responsible for the debts of his victim. All the states have vigorous laws against the practise, while Illinois glories in the fact that there has been but one duel within her borders since her existence as a commonwealth. In this, one was killed, and the other was hanged for his murder.

STEVENS

RIFLES

are so quick-firing, straight-shooting and hard-hitting, that a frog on the jump is an easy mark for the boy who has had a **Stevens** only a little while. Mechanism is simple—nothing to get out of order—unapproached for accuracy.

HERE ARE OUR LEADERS
Little Scout, . . $2.25
Stevens-Maynard, Jr., $3
Crack-Shot, ... $4
Little Krag, ... $5
Favorite. $6

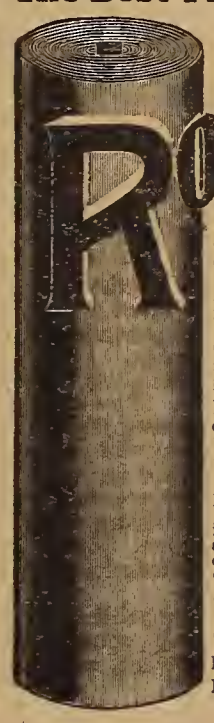
For 5c. in stamps to cover postage, we will **send free, our complete catalogue** of Shotguns, Rifles, Pistols, showing all sorts and styles, and describing the arms in detail. Gives interesting information about Cartridges, Ammunition, Sights, Targets, Care of Firearms, etc.

Most good dealers have Stevens Firearms. Insist on getting the genuine. If you find it difficult, let us know and we will ship direct, express prepaid, on receipt of catalogue price.

J. STEVENS ARMS & TOOL CO., 265 Front Street, Chicopee Falls, Mass, U. S. A.

The Best Prepared Roofing at Any Price is our Atlas Prepared Roofing $1.45 PER ROLL

Shipment from Kansas City, $1.53



It is suitable for all buildings and any climate from Alaska to the Equator

Get Our Prices on Roofing Before You Buy

Atlas Roofing is made from selected, long, fibre wool felt, thoroughly saturated with asphalt and other non-volatile compounds, and coated on both sides with a special composition that makes it look and act **LIKE RUBBER.**

In fact, similar roofings are on the market, at much higher prices, that are called "rubber" roofing. There is **NO TAR** in **Atlas Roofing**, nor any other volatile matter. It is always flexible, will not dry out or crack, will never stick in the roll, has nothing to ooze out or run in any weather, nothing to evaporate.

ATLAS ROOFING is Weather-proof, Water-Proof, Acid-Proof and Air-Tight. It will last permanently, requires no renewal, and is therefore the cheapest roofing to buy. It is suitable for flat or steep roofs, and can be laid with a hammer by anyone. **It requires no Coating** except at laps, and we furnish with each roll large-headed roofing nails and necessary cement for laps. everything complete, ready to cut and lay. We guarantee **Atlas Roofing** to give perfect satisfaction. It is obtainable only of us, and any roofing similar to it is much more expensive to buy. We will send you a free sample, if you wish, or will ship you enough for the job you have in hand on receipt of price.

C 273 Atlas Roofing—Price per roll, containing 108 square feet, (enough to allow for laps and cover 100 square feet) complete, with large-headed roofing nails and cement for laps, weight 32 lbs. **$1.45**

We will send you our Roofing Book and prices on all kinds of roofing if you write for it. It not only quotes lowest prices on reliable grade roofing, but gives prices on all supplies necessary to do the job. You can save money on everything you use in putting on the roofing. We have roofing costing you less than Atlas costs, but it has not Atlas quality. Send all orders direct to 61

Montgomery Ward & Co.

Branch House KANSAS CITY **CHICAGO** Michigan Ave., Madison and Washington Streets

20 PACKETS of FLOWER AND VEGETABLE SEEDS OR 5 GRAND ROSE PLANTS

Your choice, mailed to anyone sending only 25 cents for THE HOUSEHOLD JOURNAL one year.

Or for only 40 cents we will send both collections, the 20 Packets of Seeds and the 5 Rose Plants, and THE HOUSEHOLD JOURNAL one year.

20 Packets Flower and Vegetable Seeds

Including the following:

15 Packets Flower Seeds—Chrysanthemum, Sweet William, Dwarf Sweet Pea, Tall Sweet Pea, Pansy, Dahlia, Nasturtium, Larkspur, Poppy, Portulaca, Mignonette, Marigold, Four O'clock, Dianthus, Blue Ageratum.

5 Packets Vegetable Seeds—Iceberg Lettuce, Earliest White Radish, Spinach, Beet, Turnip. This is the finest collection of reliable and healthy seeds ever offered so cheaply. Sure to please all who get them.

5 Beautiful Rose Plants

Our choice collection includes the **Climbing Meteor Rose**, the Prince of all red climbing roses. It is rich, bright red and blooms all summer. Besides this we give one **Bright Pink**, one **Pure White**, one **Lover's Red**, and a handsome **Yellow Rambler.** All the world loves the Rose and our collection is one of the finest. They are profuse bloomers, deliciously fragrant, rich in color and are thrifty, strong and hardy. Full printed instructions for planting and care are sent with the plants.

Remember, we offer your choice of the 20 Packets of Seeds—or the 5 Rose Plants—free, if you send only 25 cents for THE HOUSEHOLD JOURNAL one year. Or all the Seeds and Rose Plants and THE HOUSEHOLD JOURNAL one year for only 40 cents. Address all orders to

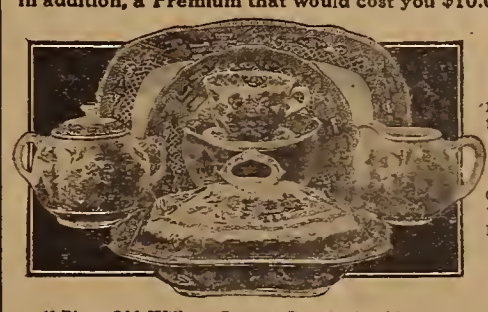
THE HOUSEHOLD JOURNAL, 119 Limestone Street, Springfield, Ohio

Old Willow Ware Dinner-Set Without Cost!

Just think—you can get this beautiful $10.00 Dinner-Set and it won't cost you a cent! Here's the explanation: dealing direct with us, the Manufacturers, makes it possible to buy goods for only a little more than it costs to make them. The regular patronage of over one million families is strong proof that the Larkin Idea—Factory-to-Family—is a practical, money-saving plan.

Now, a retail dealer gets most of his goods from a wholesaler, and the wholesaler gets them from a jobber. So you see, three dealers—and the travelers of all—have to make a profit on the goods, and you pay about twice what they really cost. Larkin Factory-to-Family dealing saves you all unnecessary expense—gives you $20.00 retail-value of high quality for $10.00.

There are over 175 Larkin Products. They include Laundry and fine Toilet Soaps, Perfumes, Toilet Preparations and Pure Food Specialties. **With every $10.00 worth you select, we give in addition, a Premium that would cost you $10.00 at a store.**



69 Piece Old-Willow Cottage Dinner-Set No. 805. Given with $10.00 worth of Larkin Products.

30 DAYS' TRIAL
NO MONEY IN ADVANCE.

To convince new customers of the real worth of all our goods, we extend 30 days' credit for $10.00 worth of Products and a $10.00 Premium. Customer then pays if pleased. A trial order will show that we can save you much money.

FILL IN—CUT HERE—MAIL TODAY
Larkin Co. Mail Product and Premium List No. 29 and explain how I can furnish my home out of present cost of living.
Name
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G. P. 64

Larkin Co.
Established, 1875. BUFFALO, N. Y.

Talking Machine Given Away!

To Our Girls and Boys

And you get it in just a few days' time if you hustle. These machines are exactly like the one pictured here, in every particular, and they are equal to

A High-Priced Phonograph

in distinctness of tone.

We have imported from Europe a large number of these splendid and handsome instruments, and we want one to go into every FARM AND FIRESIDE home. READ the Description and Our Offer.

Description

Everybody wants a talking machine, but they are usually so expensive that few can have them. Here is your chance to get a really good phonograph without a cent of cost, and get it very soon, too. FARM AND FIRESIDE guarantees every instrument to be just as pictured and described here. They are all imported from Germany.

These splendid talking machines play all makes of cylinder records, including both Edison and Columbia. Three records are sent free with each instrument. **Powerful Motor** guaranteed to run through more than one record. **New Anti-Slipping Device** to prevent reproducer from slipping on record. **Strengthened and Reinforced Base** preventing breaking of machine in transit. Each case has separate compartment for horn. **Latest Shaped Horn** exactly as pictured. **New Grand Opera Reproducer**—patented. Twice the size of ordinary reproducers, conical curved neck, indestructible dome. **Nickel-Plated Governor** ensuring evenness and firmness of tone. **Every Machine is Guaranteed** just as represented, and thoroughly tested before leaving the factory in Germany.

Just think what it means to you to hear one of these splendid talking machines in your home! It means that you can hear Grand Opera or Church music, songs or dance music, ragtime, instrumental selections or any kind of music you want, whenever you want to! Think of that!

Our Offer

We want one of these fine machines in every FARM AND FIRESIDE home, and to give every one of our family a chance to get one, we make the following liberal offer: *Send us only twenty-five subscriptions to Farm and Fireside at twenty-five cents each*, and we will send you immediately one of these superb Premier Talking Machines, complete with three Edison records! People will be more than anxious to subscribe with you, because they will get not only twenty-four issues of the best farm and family paper published, but a complete novel and all the other good things that go with it, too, for only twenty-five cents. You can easily get twenty-five of your friends to subscribe in just a few days, and then the talking machine will be really yours! Write for full particulars. We will answer you by return mail.

FARM AND FIRESIDE, Springfield, Ohio

GIVEN AWAY!

This Handsome Pony, Cart and Harness

Given Away **$2000.00** In Prizes

This is a phenomenal offer. Think of being given purely as a present, and absolutely without cost, a handsome, healthy, well-bred pony, broken to harness, and gentle in manner, together with a beautiful high grade, fancy mounted harness and a strongly constructed, elegantly finished pony cart that would make many a well-to-do boy or girl rave with envy.

What a pretty picture two or three apple faced youngsters in this cart would make, and how it would gladden the hearts of old and young alike.

Don't send us any Money

Positively no pictures or any other kind of merchandise to distribute.

The pony cart is not the only prize we are giving away. There are several hundred others equally valuable prizes that would give as much enjoyment to the older members of the family. For instance: high grade, sweet toned, beautifully carved upright pianos; Edison Phonographs that play songs of our greatest singers from both abroad and at home and the most popular bands from all over the world; Handsome cut glass sets of every description, silver sets, smoking sets, watches of both gold and silver, clocks, pocket books, furniture, safety razors, rifles and in fact many things that limited space will not allow us to enumerate, besides $900 in cash prizes.

HOW YOU CAN GET A PRIZE

You can not fail to win one of these prizes. The plan is so simple and so far different from any prize contest ever before held that you will positively be astonished when we tell you about it. You take no chance whatever, nor are you required to spend one penny in the contest, either now or at any time in the future as we have absolutely no merchandise to sell nor is there any trick or scheme connected with this prize offer. The conditions are based upon a simple co-operative principle. It is only by co-operation that we are able to make this generous offer and co-operation is bound to bring both you and ourselves success.

We can not go into details of our contest in this paper, so we ask you to write us a postal, NOW—TODAY, and by return mail we will send you, all charges prepaid, complete detailed information, with descriptions and pictures of the prizes, and we will explain how our system of co-operation is sure to bring a handsome reward.

HOME CO-OPERATIVE CO., Dept. 56, Chicago, Ill.

---

500 Pictures of Roosevelt

Given With Your Subscription or Renewal

This is the most remarkable offer ever made by any publisher in America. Read every word of it.

Copyright, Underwood & Underwood, New York

The size of this great picture as it will be sent to you is 13 1-2x20 inches—just twenty times as large as this small illustration

Before the Prices Change

On March 31st the subscription price of FARM AND FIRESIDE will be revised. This is not a decision desired by us, but something that has been forced upon us by the greatly increased cost of labor, paper and everything that goes into a good farm paper like FARM AND FIRESIDE.

For over two years, while other farm papers have been increasing their prices, we have been putting this off for the benefit of our readers, but now, in justice to ourselves, we are at last compelled to raise the price.

We will let you renew or subscribe right away—not for one year, but for three or seven years—before the prices go up. If you do this, you will get FARM AND FIRESIDE at the present low prices for several years to come, while others are paying the increased prices. $1.00 now will save 50 cents after March 31st, and 50 cents now will save 25 cents then. Don't delay! Even if you have renewed lately, renew again for more years still, and be sure of the low price.

To relieve the rush that would naturally come in March and to show you our appreciation for sending us your subscription promptly, we will send you a great ensemble picture containing 500 different photographs of President Roosevelt, if you will accept one of the offers at the bottom of this page **before March 31st.**

This is the greatest and most wonderful picture ever made. It is really 500 different pictures and shows the President in 500 different and characteristic attitudes. It cost us nearly $1,000. There is no other picture like it anywhere on earth. No other like it can ever be made of President Roosevelt. It is the most wonderful picture in America of the greatest living American. The size is 13⅝x20½ inches, printed on heavy coated stock, all ready to put up in your parlor or sitting-room.

Your Greatest Opportunity

Remember, this great picture can be obtained nowhere else on earth, because FARM AND FIRESIDE has the exclusive right to reproduce it. It is so wonderful that five years from now it will be worth many dollars, and after President Roosevelt is out of public office, this picture will be almost priceless to your sons and grandsons; President Roosevelt has always been such a sturdy friend of the farmers, that we want a copy of this great picture to be in every American home—especially every FARM AND FIRESIDE home—so we make this offer:

If your subscription has already been renewed for several years, we will send you one of these wonderful ensemble pictures for only one *new* subscription to FARM AND FIRESIDE, at 25 cents (1 year), 50 cents (3 years) or $1.00 (7 years). You don't get merely one picture, but 500, which cost close to $1,000—the greatest triumph of the photographers' art!

This great ensemble picture of 500 photographs is not only the most wonderful picture ever produced, but a remarkable and delightful *puzzle as well.* It will keep every one absorbed and guessing for days.

Free with these offers up to March 31st, or with a new subscription.

OUR OFFERS

OFFER No. 1	OFFER No. 2	OFFER No. 3
$1.00	**50 cts.**	**25 cts.**
gives you FARM AND FIRESIDE 7 whole years—168 big, helpful numbers—the 500 photographs of President Roosevelt, and "The Great Roosevelt" Puzzle.	gives you FARM AND FIRESIDE 3 whole years—72 big, helpful numbers—the 500 photographs of President Roosevelt, and "The Great Roosevelt" Puzzle.	gives you FARM AND FIRESIDE 1 whole year—24 big, helpful numbers—the 500 photographs of President Roosevelt, and "The Great Roosevelt" Puzzle.

Accept one of these offers before the price goes up! NOW is the time!

RUSH THIS ORDER BLANK

FARM AND FIRESIDE,
Springfield, Ohio.

Gentlemen:—I accept your special limited offer No. ..... as advertised in the March 10th Farm and Fireside, for which I enclose..... Yours truly,

.....

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.....

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This coupon entitles the sender to the 500 Roosevelt Pictures mentioned above.

AGRICULTURAL NEWS-NOTES

Clarke County, Iowa, is becoming a leading timothy seed producing center. A large amount of seed has already been shipped from Murray by the growers in the southern section of the state.

H. W. Campbell, the originator of the system of culture known as "dry farming," is now making a tour in New Mexico and addressing farmers' meetings. It is a clear case of "going about doing good."

The wide-awake truck growers and small farmers who know by experience the value of nitrate of soda as a paying fertilizer will be pleased to learn that the great strike at the nitrate beds in Chili is now over.

The government crop report for November relating to the apple crop of 1907 proved to be very accurate and is fully corroborated by the December returns. The crop is the smallest one during the past ten years.

What is needed now, and what the United States Department of Agriculture is striving to accomplish, is a system of education in our public schools which will better meet the needs of our rural communities.

Secretary Wilson, who recently visited the Colorado Experiment Station, finds that the sugar beets grown on irrigated land net the farmers about seventy-five dollars an acre. Four and one half to five acres is the customary acreage for each grower.

The support which senators and congressmen have given to the United States Department of Agriculture is highly commendable. It affords Secretary Wilson an opportunity to put scientific knowledge into the hands of American farmers, and best of all, it is being appreciated and utilized. *

◈

NEW SAWS AND FRESH FILINGS FOR FARMERS

"Farm economy" often means the spending of more money for some things.

Post up on the needs of your fences for summer—you may need to put a few posts up.

A garden is a body of land surrounded by a body of chickens anxious to explore it.

The father who sets a bad example will find an answer thereto in the conduct of his son.

If some men are as lazy as they dare be, the farmer may be said to be as busy as he dare be.

The farmer who carries produce to town always leaves the market better than he found it.

It is a poor farmer who will not work two ways—to the interest of his neighbor as well as his own.

Cleanliness in fence corners and around the corners of the house and yard is close to good farming.

If you know of anything you would like to see on the market that is not already there, raise and offer it.

"Book farming" is the art of putting down in an account book everything that comes and goes on the farm.

The farmer is ahead of the city man again, in that he is able to live the higher life on a lower expense.

There are farmers who would never have known that there was a panic on if they had not read it in the papers.

The farmer is not interested in making an egg stand on its end as much as getting the egg to help both ends meet.

The world has a right to all the good things it can find on the farm as soon as the farmer is willing to part with them.

The farmer has a right in the air as high as his trees will grow, and a right in the earth as deep as his plow will go.

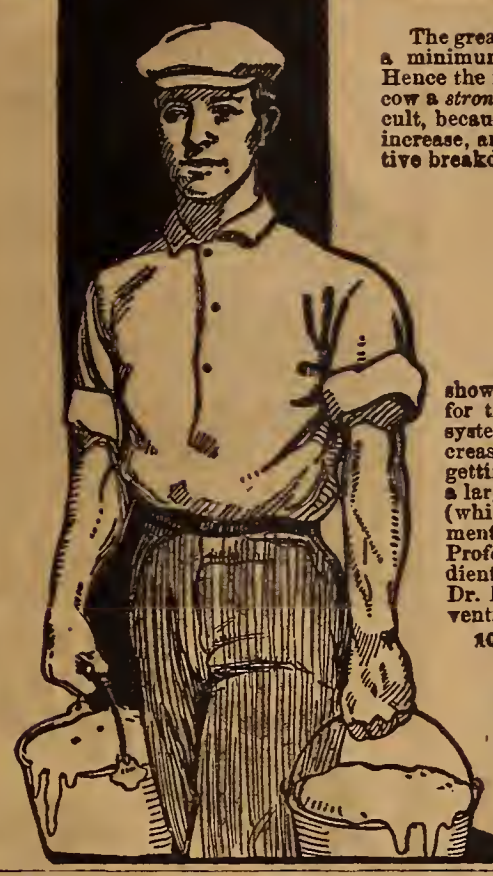
The right place for the right man is in the field most of the time, in the barnyard some of the time, and on the fence none of the time.

The farm is like a clock, which the farmer winds daily, hearing it strike every time he takes its products to market. W. J. B.

◈

Our readers sometimes wonder if our guarantee about advertising is not a very costly policy. The truth is that we are so careful about the advertisements we publish that we receive but few kicks from dissatisfied subscribers. These few cases are generally only a slight misunderstanding, but we always see that our readers get fair treatment, even at our own expense. Read the guarantee on the editorial page of this number.

Two Pails From One Cow



The greatest yield of milk requires that food waste be reduced to a minimum and food assimilation increased to a maximum. Hence the road to success as a producer of milk lies in giving the cow a *strong digestion and increasing appetite.* This seems difficult, because we are continually overfeeding in our effort after increase, and consequently inviting nervous disorders and digestive breakdown. Here

DR HESS STOCK FOOD A TONIC

shows its value. A tonic and mild laxative, it contains iron for the blood and nitrates to expel dead matter from the system. Its use strengthens the stomach nerves and increases the secretions. A cow, steer, horse, hog or sheep getting Dr. Hess Stock Food is in condition to benefit from a large amount of food. It makes appetite for coarse fodder (which saves grain) and by improving digestion saves nutriment that would otherwise be wasted in the excrement. Professors Winslow, Quitman and Finley Dun endorse the ingredients contained in Dr. Hess Stock Food. It is the prescription of Dr. Hess (M. D., D. V. S.) and is valuable not only as a tonic but as a preventive of disease. Sold on a Written Guarantee.

100 lbs. $5.00. 25 lb. pail $1.60. Except in Canada and extreme South and West. Smaller quantities at a slight advance.

Where Dr. Hess Stock Food differs in particular is the dose—it's small and fed but twice a day, which proves it has the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal preparation, and this paper is back of the guarantee.

Free from the 1st to the 10th of each month—Dr. Hess (M. D., D. V. S.) will prescribe for your ailing animals. You can have his 96-page Veterinary Book free any time for the asking. Mention this paper.

DR. HESS & CLARK, Ashland, Ohio.

Also Manufacturers of Dr. Hess Poultry Pan-a-ce-a and Instant Louse Killer.
Instant Louse Killer Kills Lice.

$55.00 Manure Spreader Box

Will Save You $50

The only Tight-Bottom, Force-Feed Successful BOX SPREADER made.

Actual tests have demonstrated that manure is in every way the best fertilizer; further, that manure has 90 per cent more real value when spread by a machine than by hand—you get it even. There is no waste, etc. You owe your land something if you expect to keep it producing. Every farmer should have a spreader. Increase the yield. Save labor, and HAVE MORE MONEY IN THE END.

Send for Spreader Circular "How to Make Money on the Farm" Just off the Press

"Money Maker"
Will pay for itself in one season

30 Days Free Trial

"Always Ready" 2 HP Gasoline Engine. $51 Send for Special Gas Engine Catalogue.

Will Fit Any Wagon

Montgomery Ward & Co.
53 CHICAGO AND KANSAS CITY

Clip Your Horses

For the first time in the history of horse clipping we offer to horse owners a machine that has every part of its driving mechanism guaranteed 25 years. The

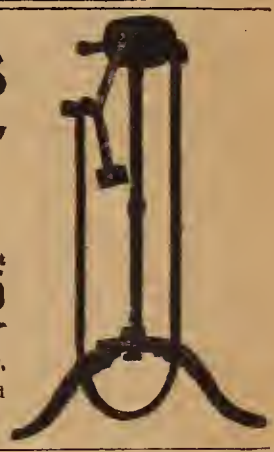
Stewart No. 1 Clipping Machine

The gears of this marvelous machine are all cut from solid steel and hardened file hard. They couldn't be harder or tougher if the price was ten times as much, and they are all enclosed in a metal case safe from dust and dirt. They run constantly in oil, which practically does away with friction and wear. Each machine is fitted with 6 feet of new style, light, easy running flexible shaft and the celebrated Stewart one-nut tension knife—highest grade. It is the most perfect clipping machine ever made at any price, and turns easier and clips faster.

The Price is ONLY $6.75

Every horse should be clipped in the spring. Horse owners all recognize the advantages of clipping, and this is the machine to do it with. Order one today. The price is only $6.75.

Send for our new beautifully illustrated catalog. It shows everything modern in horse clipping and grooming machines as made in our factory—the largest of the kind in the world.



CHICAGO FLEXIBLE SHAFT CO., 124 La Salle Ave., CHICAGO

The Celebrated DeLoach Mill

The World's Standard for 20 Years

Saw Your Own Lumber
For lumber is lumber nowadays, and you can do it better than the other fellow, with our help.

We Set the Pace —Others do the Best They Can

A 15-year-old boy can operate successfully. Two hands cut 5,000 feet per day. 15,000 mills in use the world over. Variable Feed, Friction Set Works, Automatic Steel Triplex Dogs and Diamond Track produce results impossible with other mills. Send for catalog of Saw Mills up to 200 H. P., Steam Engines and Boilers, Gasoline Engines, Portable Corn and Feed Mills, Planers, Shingle Mills, Wood Saws and Water Wheels. Prompt shipment and we pay the freight.

DeLOACH MILL MFG. CO., Box 300, BRIDGEPORT, ALA.

Post Cards Given

Cut out this ad and we will send you a set of 3 most beautiful post cards you ever saw. Send 2-ct. stamps for postage. Full set of 10 for 10 cents; 3 full sets 25 cts. Everyone answering this ad immediately will also receive our splendid farm magazine 3 months on trial free. We make this great offer to introduce our big farm paper which already has more than a half million readers. Address at once

Valley Farmer Post Card Dept., 33, Topeka, Kansas

Agents Wanted

Agents Make Big Money with our SAMPLE CASE and its valuable complete outfit of tools and specialties for the farm and home—all great sellers. Inexperienced men have sold fifty to sixty a day. Why work for small wages when you can be your own boss and make this big money? Write today for special price to agents and agents' guide "The Way to Win," also catalog full of money makers.

We refer to the publishers of this paper

FOOTE MFG. CO. Dept. 301
Great Agents Supply House, formerly of Fredericktown. Dayton, O.

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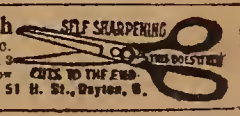

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If you are going to build a house, repair or improve your old one, send for our large Catalogue of

In buying your materials from different local dealers a large profit is paid on each line of goods bought. By the time the house is finished, the cost is much greater than anticipated. Isn't that usually the case?

You need not pay more than the right prices and yet put into your house materials of dependable quality—Ward quality—if you buy all of your materials of one concern and of one department, **Montgomery Ward & Co.'s Building Material Division.** You pay but one small profit on the whole lot, instead of a good profit to each dealer on the many lines. You might as well buy at the prices your dealers pay as to let them buy for you and each one get a good profit for so doing.

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Montgomery Ward & Co., Michigan Ave., Madison and Washington Streets **CHICAGO**

Sunday Reading

Sing a Song

BY W. E. SCHULTZ

If you get to feelin' blue,
Sing a song;
Vain regrets will never do—
Sing a song;
Be down-hearted as you may,
It will brighten up the day,
It will drive your care away;
Sing a song.

If the skies are clouded o'er,
Sing a song;
Just forget the cares of yore—
Sing a song;
If misfortune's winds are blowin',
An' through all it keeps a-snowin',
Don't give up, but keep a-goin'—
Sing a song.

◈

A Parable

BY JOHN A. SIMPSON

A TRAVELER at the close of a long, trying day found himself in a sparsely settled community, his horse practically exhausted, himself in nearly the same state, the shades of night gathering thick and fast, a storm brewing in the west, and no shelter or supper promised him.

Pushing along the tedious way, he saw the gleaming lights of a farmhouse. A quiet, substantial place it seemed to be, so white and clean that it shone in the dark; farm buildings, yards and gardens grouped about—the whole giving evidence of thrift and peace.

The tired traveler was welcomed, and after his horse had been made comfortable for the night, and he had taken off his traveling coat, he drew up with the family to the supper table that the good housewife had just prepared.

The stranger noted that, naturally and reverently, as though it were an established custom, the farmer offered thanks before the meal was begun.

And what a good meal to be thankful for! Biscuit almost as good as those his mother had made in his boyhood! Butter as yellow as the gold of Ophir! Honey as sweet as the scent of the May blossoms! Coffee more fragrant than attar of roses! Fruit that had flavored and mellowed under the magic influence of sun and rain and wind and dew until it was as much better than the ambrosia of the gods as the sun is brighter than candle light!

And after the meal had been disposed of, and the family had gathered before the open fireplace, what a cheerful family it was! How hospitality and good humor and happiness seemed to flow from every member of the household. until the wind and rain and darkness of the night were all forgotten in the peace and plenty of the fireside!

And when the time had come for rest, how the traveler's mind went back to the old homestead, as the farmer and his family read from the Sacred Book, and knelt to offer their evening devotions!

And when he had retired to the simply furnished room where he was to sleep, and had crept into the snow-white bed, how restful and comfortable it all seemed!

There were valuahles among the traveler's belongings, but they were not tucked that night beneath his pillow. There was a revolver that he sometimes placed under his head, but to-night he gave scarcely a thought to it.

The traveler was not a praying man, but now there echoed in his mind the old-time "Now I lay me," and he went to sleep thinking of his mother's prayers, and woke dreaming that he was a boy again and that the farmer's voice that had wakened him was his mother's patient voice of the old time calling him to breakfast.

When the traveler had set out an hour later it seemed to him that some peculiar change had occurred in something since the night before. He looked about him, but no such change was evident. There was the same low, murky sky, the same uncongenial atmosphere, the same muddy road, the same unsettled country, and the same hard journey ahead of him.

The night that had been spent at the cheerful farmhouse had proved a tonic, an inspiration and a blessing. It had not only refreshed his body, but it had revived his soul.

The poor supper and the uncomfortable bed of the succeeding night were rendered endurable by the memory of the preceding ones, and, altogether, the night in the cheerful farmhouse never entirely ceased to waken in his breast hopeful and helpful thoughts.

This little story is a parahle of the journey of life. So many tired and lonesome travelers upon its stony wastes, its treacherous bottoms, its desperate hillsides! So many storms and fogs and clouds! Such awful burdens! Such pitiful darkness! Your home, your hand, your heart, like the cheerful farmer's, may become an oasis to many a fellow-pilgrim on the highway of life. But alas! too often the big front door of loving sympathy is closed and barred securely, and worthy brethren denied an entrance into the scope of one's concern.

"Be not forgetful," says the writer of the Epistle to the Hebrews, "to show love unto strangers, for thereby some have entertained angels unawares."

"So then," says Paul in the Letter to the Galatians, "as we have opportunity, let us work that which is good toward all men, and especially toward them that are of the household of the faith."

The opportunities are a multitude that the Christian has to work good works,

MR. OWEN KILDARE

thereby helping his comrades, and winning souls to the Master. It is recorded of him that he went about doing good.

There are lonely souls that perish,
While the days are going by;
There are broken hearts to cherish,
While the days are going by:
Many a smile we can renew
As our journey we pursue—
Oh, the good we all may do
While the days are going by.

◈

Remarkable Career of Owen Kildare

BY MAX MERRYMAN

READERS of stories have seen in recent years the name of Owen Kildare signed to some very interesting ones, and it has been conjectured that this was the nom de plume of some writer of fiction, but it is the real name of an author who has literally fought his way to success against heavy odds. It is doubtful if any other living American writer has ever known the depths of poverty in childhood that Owen Frawley Kildare has known. He was horn forty-three years ago in the lowest of the slum districts of New York. His father died when he was but little more than a baby, and he has literally had to earn his own living from the time he was six years of age. A stepfather came into the miserable home at this time, and the fatherless little lad was sent forth into the streets to pick up a livelihood as best he could. At thirty years of age he could neither read nor write, and now his work is found in some of our hest periodicals.

Like most hoys of his class, little Owen Kildare sold newspapers, and his childish voice could be heard crying his paper before he was seven years old. A man gave him a nickel, and with this "start" he purchased his first supply of papers. His only associates were the gamins of the street, and the very atmosphere he breathed was tainted with evil. It was not to be wondered at that he fell into evil habits and was for years without ambition to live a good life and rise above his lifelong environment of sin. It was the influence of a good woman that caused the almost miraculous change in Owen Kildare. This woman was a school teacher in the slums in which Owen Kildare lived. One day Owen Kildare saved her from a drunken man who sought to annoy her while she was on her way to school. After that he looked out for her when she had to pass through some of the worst streets. and it was she who inspired him to make an attempt to

[CONCLUDED ON PAGE 26]

A GOOD BARN SHOULD

Amatite on the roof of H. J. Widness Barn, Park Ridge, N. J.

HAVE A GOOD ROOF

Amatite ROOFING

TRADE B MARK

Best for Every Farm Building Because It Needs No Painting

WHEN you go to buy roofing next time, ask the dealer how much he would charge to keep it properly painted for ten years.

You'll be astonished to see how much a painted roofing really costs. You will find that the painting every two years **costs more** than the roofing itself.

The best and most economical solution of the roofing problem for you is to buy Amatite Roofing instead of one that needs painting.

Amatite needs no painting or coating.

Lay it on the roof and the work is done for many years. You have no maintenance expense to figure on when you buy Amatite. The first cost of Amatite is its only cost for the entire period.

If Amatite costs twice as much per roll as painted roofings, it would still be more economical to buy because there is none of that big extra expense for paint.

But Amatite does not cost twice as much—in fact, it costs less. In other words, it is actually cheaper in the long run to cover your old roof with Amatite, than to keep on painting it year after year.

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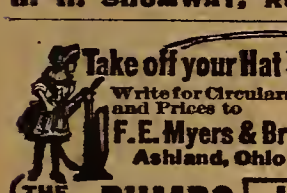
R. H. SHUMWAY, Rockford, Illinois



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Forward! March!
The month of March is here.
Keep up the march,
Do the best work of the year.
W. J. B.

◈

GIVE THE SOIL A "SQUARE DEAL"

This is a self-evident proposition. The prosperity of our great nation depends mainly upon our natural resources. The chief of these is the land that will produce crops. Secretary Wilson has tersely stated: "The miner cannot restore the mineral to the mine. With the farmer it is different. The primal forces and atoms of the universe are his. The sun shines and the rain falls, and the farmer applies his art and science to inexhaustible resources, ever adding enormously to the country's wealth, credit, capital and welfare." W. M. K.

◈

A CARPENTER ADDS TO HIS INCOME

A carpenter who says his time is not fully taken up would like some kind of work that would add a little to his income.

A carpenter friend tells me that he employs his spare time in making bee hives, chicken coops, step ladders, gates and wheelbarrows. He says he has also made quite a number of hand carts for feeding stock, and quite a number of other little conveniences for farm and house use. People have learned he can make these things, and come to him for them, and he has little time to sit down and smoke. He also goes about the town noting where repairs are needed, then offering his services. He says he gets lots of work that way. FRED GRUNDY.

◈

CULTIVATION OF LOCUST SAPLINGS

To those who are interested in the cultivation of locust trees for fence posts I would like to give our plan for the care of the trees.

In 1904 I purchased two thousand young trees. As I had purchased them late in the fall, I did not set them out at once, but put the roots underground in bundles of five hundred each.

A large number of my neighbors purchased trees at the same time and of like kind and size. Most of them set their trees out in the fall, with the result that many of them were frozen. One man who lived near the river had set out a large plot along the river bank. They seemed to be doing well, but during the winter the rabbits came up from the river and gnawed the bark from the trees, so that in the spring he had only a few live trees.

That winter we cleared some land along the edge of the woods, on a little elevation, and in the spring, after we had cultivated it well, we set out the trees. They were set out four feet apart each way, to allow frequent cultivation. The first summer was rather dry, and they did little but get a good start. During the summer we cultivated them about once every three weeks, for they are affected by the growth of weeds more than one would suppose.

Since then they have grown much larger each summer, and with frequent pruning and cultivation have reached the height of fifteen and sixteen feet, with trunks of about three and one half inches in diameter. G. G. FRY.

◈

PREPARING FOR CORN

There are a number of reasons why we should prepare our soil well for the corn crop. One is that the corn is capable of growing more bushels to the acre than any other cereal crop. Another is that there is more labor bestowed upon the corn crop in order to grow it than upon almost any other of the cereal crops.

Corn has a long growing season and requires a large and constant supply of plant food. It needs plenty of plant food right from the start, and in order to keep up this supply of available plant food there must be plenty of plant food becoming available as the crop grows. Stable manure applied to a sod furnishes this supply in an ideal form. The manure should be plowed under early in the spring, so that it may be incorporated with the soil and be ready for the young plants to feed upon. It is best to plow before the ground stops freezing, since the freezing will kill many injurious insects that are usually found in sod land. Then there will be more moisture saved for the corn when the drought sets in, which is nearly sure to come at some time during the summer.

Commercial fertilizers have usually been very unsatisfactory when applied to corn; however, a moderate application of superphosphate or superphosphate and potash may be profitable where stable manure is used or where a sod is turned under.

The so-called Williamson method of growing corn seems to be attracting considerable attention in the South. Mr. Williamson does not work his corn until it gets up some distance. This is to dwarf it, so that it will not make so much stalk. Then he begins to cultivate and make heavy applications of fertilizer, in order, as he says, to make the ear.

He applies fertilizer and succeeds in growing fairly good crops, but I feel sure that he would grow more corn if he did not try to dwarf it. I have never seen his yields compared with corn so heavily fertilized without the dwarfing. The reports have all been in comparison with light applications of fertilizer which do not fairly show results of the dwarfing.

For the Northern grower it is the safer plan to make the corn do its best from the start, and this can be done only by providing plenty of plant food from the start, and preparing the soil so that the corn can get the food and be kept well cultivated. A. J. LEGG.

◈

CARING FOR AND OILING HARNESS

As harness has taken quite a jump upward in price, it pays well to take proper care of it. Twenty-two years ago we purchased a set of harness for ordinary farm work that is good yet to-day. Some of our neighbors have used up two sets during this time. This difference is simply because we have given ours an annual cleaning and oiling, and of course cared for it in other ways, as it should be taken care of.

Water, not usage or wear, is what makes the harness crack and break when subjected to hard strain. From this it would of course follow that horses should never be worked in rains. However, this cannot always be avoided. When harness does get soaked by rain, it should be wiped off with rags as soon as one has it in the stable.

Basement stables have the reputation of making harness become soft and rotten. The reason for this is largely because such stables are not properly ventilated, so the carbonic-acid gas exhaled by the horses and other animals can pass off. This acid gas with moisture is what makes the leather rot.

In stone stables it is better to keep harness in cupboards made of wood.

The most important factor in making harness wear well is to keep the leather well filled with oil. It might be said that oil and water are enemies. Where one is, the other cannot be. If, therefore, the leather pores are filled with oil, moisture cannot enter and cause its destructive work.

It would not be too often to clean and oil harness twice a year—in spring and in fall. On account of so much work in fall we practise spring oiling only.

After unbuckling, I soak the single pieces in strong soap water in a tub. After being left for several hours, the adhering dirt will be softened enough so it can be removed with rags and a stiff brush. From some pieces the dirt will have to be scraped with a blunt knife.

After washing, the pieces are hung over the rungs of a ladder, which is put in a well-ventilated but shady place. Before the leather is dry, and while it yields readily when bent, the oil is applied.

As to what kind of oils to apply, we have always used those ready prepared. I have read formulas for making one's harness oil, but it appeared to me that to purchase the separate materials and mix them made home-made harness oil as expensive as that already prepared.

I apply the oil with a rag. Especial care should be taken to get oil on both sides and in corners near metal parts. We all know the saying that a chain is not stronger than its weakest link. Likewise, a harness can stand only as much strain as its weakest places will bear.

I always give the harness a second oiling the day after the first application.

After several days, when the oil has mostly soaked into the leather, that yet on the surface should be rubbed off with rags. If left on it will dry on the outside and become sticky and accumulate dust.

Horse collars, too, must be cleaned and oiled. They are of leather, therefore they should have the same treatment as the rest of the harness.

F. A. STROSCHEIN.

◈

Let the merchant advertise,
The farmer fertilize,
The minister spiritualize,
The musician harmonize,
The tailor cut our size,
The oculist treat 'em eyes,
And all economize.

◈

The man who works and runs his place
As his farm paper wisely states,
Will laugh because he won the race.
W. J. B.

◈

When you are sitting comfortably by the big wood fire reading FARM AND FIRESIDE, don't fail to look over the advertisements. You will find so many things with which to satisfy your needs and add to your happiness.

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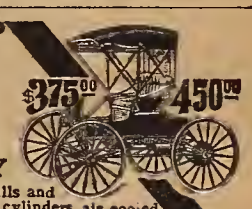

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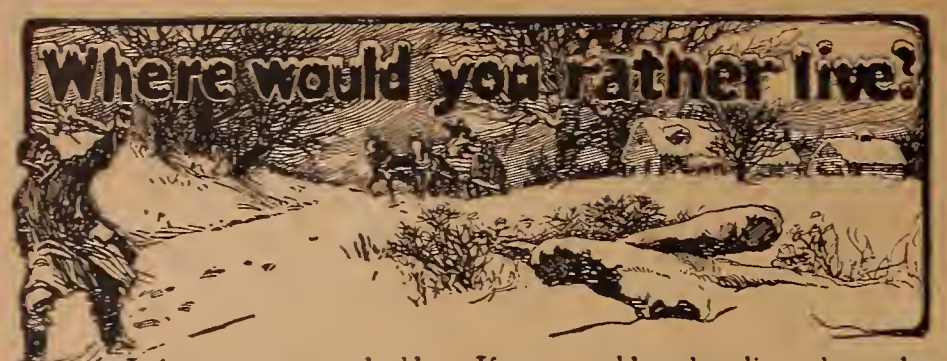

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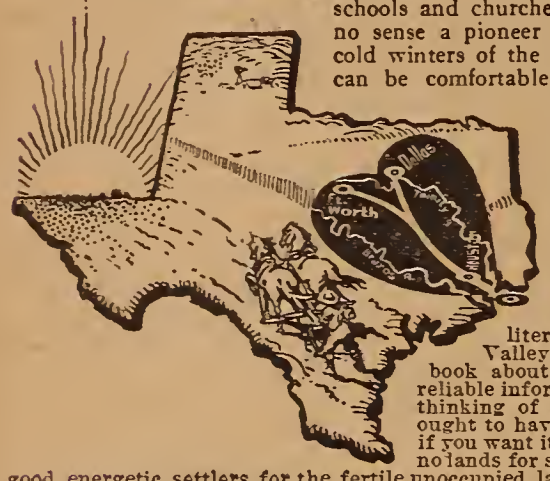
Trinity and Brazos Valley

"The Heart of Texas"

Good land in this fertile region can be purchased at from $5 to $40 an acre—land that is the equal of $25 to $100 land up North. There is really no need for you to farm high-priced land where you are when equally good land can be bought in the Trinity and Brazos Valley, "The Heart of Texas," for much less money. The low-priced land will raise as large, or larger crops, and will leave you a good margin of profit. Frequently one crop pays for the land. The Trinity and Brazos Valley Railway runs through the very center of the Trinity and Brazos Valley, "The Heart of Texas," furnishing the people of that favored section with direct railroad transportation to Dallas, Fort Worth, Houston and Galveston, the largest markets of Texas. Besides railroads, the Trinity and Brazos Valley has telegraph and telephone lines, rural free delivery routes, schools and churches of all denominations. It is in no sense a pioneer country. If you have tired of the cold winters of the north, and want to live where you can be comfortable and happy and where you can make good money, you will find all of this in the Trinity and Brazos Valley, "The Heart of Texas." Before it is too late, look into this opportunity. Take a trip down there and see for yourself how much better off the people are. Rates are low. It won't cost much and will be the best thing you ever did.



Let me send you some interesting literature about the Trinity and Brazos Valley to read these long evenings. Our book about Texas is full of photographs and reliable information—the very information a man thinking of settling in "The Heart of Texas" ought to have. I'll send it to you absolutely free if you want it. The Rock Island-Frisco Lines have no lands for sale and are only interested in getting good, energetic settlers for the fertile unoccupied lands along their lines. To such men every help possible is freely given.

I have chosen several specific sections, where conditions are especially favorable for new settlers, and am advertising their advantages. If you would prefer some other section than the Trinity and Brazos Valley, look for my advertisements in other issues of this paper, or write and tell me what other section you favor and I'll fully inform you.

Rock Island — FRISCO

JOHN SEBASTIAN, Pass. Traffic Mgr., Rock Island-Frisco Lines and C. & E. I. R. R.
1222 La Salle Station, Chicago, or 1222 Frisco Bldg., St. Louis

Do You Want These Dishes?

You can get them in just a few days' time if you will hustle a little—and you don't have to pay a cent for them! Thousands of sets have been given away under this plan, but no sets as good as this, for this is the very latest and best pattern, and was gotten up especially for Farm and Fireside. These sets retail at from $6.00 to $8.00 each, so if you accept our offer below, you will get

AN $8.00 SET FOR NOTHING!

DESCRIPTION

This superb dinner set is composed of forty-two pieces of the finest semi-vitrified porcelain china, which is the most durable china made. Each piece is pure white and a perfect piece of porcelain china. Every article in the whole set is decorated with a handsome pure gold embossed border especially designed for Farm and Fireside, and in the center of each piece we will have **your initial** embossed in **solid gold** raised slightly above the surface of the china. By the new semi-vitrifying and baking process used in making this china, the **gold will not wear off,** and this ware will stand the hardest kind of ordinary usage perfectly. This beautiful set will make you so proud that your friends and neighbors will certainly want one, too, so be the first in your town to accept our offer below. We guarantee every set.

OUR GREAT OFFER

Farm and Fireside, Springfield, Ohio:—
Please tell me how I can get the dinner set.

Name .....

Address .....

Mail to R. F. D. No. ..... State .....

If you will send us your name and address on this coupon or a postal, we will immediately send you a beautiful colored lithograph giving the exact colors of this handsome 42-piece porcelain dinner set, and telling just exactly how you can get it by obtaining only a few subscribers to Farm and Fireside. Don't wait! The sooner you write, the sooner this handsome set will be yours. No reason why you should wait. Write to-day.

FARM AND FIRESIDE, Springfield, Ohio

POINTS FOR THE FARMER

No other occupation offers so rich rewards, all things considered, as agriculture offers to those who are willing to earnestly train themselves for it.

The theory and practise of agriculture are coming closer together every day. There is no conflict between the scientific side of things and the common-sense side of things.

To-day the tilling of the soil has become a science; and just like all other sciences, it has the scientist or expert to prescribe the best methods of plowing, planting, growing, harvesting and marketing the crops, and to this end our great agricultural schools and farm magazines are each year turning out expert farmers. The farmer to-day must be up to date, employing the modern methods and using modern machines. All of the modern conveniences, such as the rural delivery of mails, the rural telephone, and last, but not least, the rural street railway, are of great benefit and comfort to those fortunate enough to have access to them.

Collin Shaver.

GIVE THE AMERICAN FARMER A CHANCE

Of late there has been considerable discussion through the farm press regarding the sale of machinery in other countries by American manufacturers at less prices than the same goods are offered for at home.

The only reason that has been given for such a business policy is that the machinery sold in foreign countries was of the older models—machinery that was not sold by the different American agencies and returned to the manufacturers.

I would like to ask why this machinery is not offered to American farmers at the prices placed upon it when it is put on the markets of other countries?

The twine binder, the mower, the sulky plow, the drill, the harrow and most of the other machines which the Western and Northwestern farmers use have not been radically changed or improved for ten years or more. Machines in all these classes are but little better than they were in 1890. We use the same number of horses to plant and cultivate and harvest our crops that we did then. We cannot sow any more wheat with the drill of to-day than we did with the one made fifteen years ago. If anything, machinery is being made heavier now than then.

Farmers understand all these things, and many of them would be glad to buy older models of the standard makes of machinery if they could get them at a discount of ten or fifteen dollars or more, as they are reliably reported to be sold in other countries. Lawrence Doolittle.

Remarkable Career of Owen Kildare

[continued from page 24]

become the man it was possible for him to become. Through her influence he became a student at the Cooper Institute when he was thirty years of age, and she helped him with his studies. She made a man of him and inspired him with a fixed determination to secure an education. When he had proved that he was in earnest, the school teacher married him, and they were very happy together until her death, which was a cruel blow to him, and nothing but the memory of her affection for him and his promise to be true to her kept him from going back to his old life. One day he saw in a New York paper an offer of a prize of ten dollars for the best story of six hundred words based on actual personal experience. Owen Kildare won this prize, and it was the beginning of his remarkably successful literary career. He wrote as few men could write of the life of the people of the tenements. His first book was an autobiography, entitled "My Mamie Rose," in which he told the story of his meeting with his wife. Then he wrote a book, called "Up from the Slums," and another one, entitled "The Good of the Wicked," and still a third book, called "The Wisdom of the Simple." All of these are books in which is portrayed the life of the poor of a great city. Speaking of his work he has said:

"I may not be able to shape my stories right, but I can tell of things I know, of lives I have lived myself."

Mr. Kildare has just finished a long story, entitled "The Romance of Hans Hogan," which will be published serially and then brought out in book form.

But no story that he can write can have in it more of human interest than his own life story of high achievement against such heavy odds.

We want every reader of Farm and Fireside to realize the importance of "Farm and Fireside Day." We hope that every one of the Farm and Fireside family will help us make that the biggest subscription day Farm and Fireside has ever had. We want *your* help. Please do not disappoint us.

$30 WATCH CASH OR CREDIT — ONLY $22.00

GUARANTEED 25 YRS. — 17 JEWEL ELGIN

WRITE TODAY FOR
OUR FREE WATCH CATALOG
It tells how we sell ELGIN and WALTHAM High Grade Watches in 14k. 25-year gold filled cases everywhere for cash or on credit terms of
$2.00 TO $5.00 A MONTH
and you wear the goods while paying for them. Confidential; no security asked. Prices $5 to $45. **THIS MONTH**—a fine 17 jewel Elgin. 16 size thin model in 14k 25-year gold filled name engraved case, worth $30, only $22, on terms of $3 a month, sent without a cent down, subject to your approval. Largest Watch House in the West.
HARRIS-COAR CO.
1396 GRAND AVENUE, KANSAS CITY, MO.

NO MONEY DOWN — SENT TO YOU PREPAID

CASH PRIZES

are being awarded each month in addition to other liberal rewards for introducing Farm and Fireside to your friends and neighbors. Your time is your own, your territory is unlimited, and we furnish

YOU WITHOUT COST

a complete outfit, including a large catalogue of 250 handsome merchandise rewards. This proposition is entirely new, and your employment **is permanent.** We want an official representative in every community. Be the first one in yours to find out about this liberal plan. Write to-day to

Merchandise Payment Department
Farm and Fireside
Springfield, Ohio

WE SHIP ON APPROVAL *without a cent deposit,* prepay the freight and allow **10 DAYS FREE TRIAL.**
IT ONLY COSTS one cent to learn our *unheard of prices* and *marvelous offers* on highest grade 1908 model bicycles.
FACTORY PRICES *Do not buy* a bicycle or a pair of tires from *anyone* at *any price* until you write for our large **Art Catalog** and learn our *wonderful proposition* on first sample bicycle going to your town.
RIDER AGENTS everywhere are making big money exhibiting and selling our bicycles. **We Sell** cheaper than any other factory.
Tires, Coaster-Brakes, single wheels, parts, repairs and sundries at *half usual prices.*
Do Not Wait; write *today* for our *special offer.*
MEAD CYCLE CO., Dept. M83, CHICAGO

Homeseekers, Come to Tennessee

Tennessee produce growers most fortunately situated. Tennessee produce reaches southern markets just as extreme southern-grown produce is exhausted, and reaches northern markets several weeks earlier than northern-grown stuff, thus commanding very best prices both north and south. From $100 to $400 per acre cleared from Cantaloupe, Cabbage and Tomato crops in Tennessee in 1907; notwithstanding, this land is selling for from $5 to $20 an acre. Excellent climate; pure water. For descriptive literature address H. F. Smith, Traffic Mgr., Dept. S, Nashville, Chattanooga & St. Louis Ry., Nashville, Tenn.

REDUCED COLONIST RATES

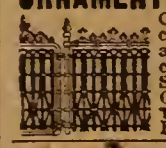
One way tickets at special low rates on sale daily throughout March and April, from Chicago and other points, via the CHICAGO, UNION PACIFIC & NORTH WESTERN LINE, to San Francisco, Los Angeles, Portland and Puget Sound points.
Daily and Personally conducted tours in tourist sleeping cars. Double berths only $7.00, through from Chicago. For full particulars write S. A. Hutchison, Manager, Tourist Dept., 212 Clark St., Chicago, Ill.

New State of Oklahoma Good improved lands in Canadian Co., four to ten miles from railroad towns. For lists and special prices write at once to **H. S. PARKER, Elreno, Oklahoma.**

CALIFORNIA Irrigated Fruit, Alfalfa Farms. Easy payments. Special offer. New Gov't aided canal. Catalog free. Woosley, 702 Market St., San Francisco.

ORNAMENTAL FENCE
25 DESIGNS, ALL STEEL
Handsome—cheaper than wood—more durable. Special prices to churches and cemeteries. Don't buy a fence until you get our free catalogue.
Kokomo Fence Machine Co.
427 North St., Kokomo, Ind.

ORNAMENTAL WIRE AND STEEL FENCE



Cheaper than wood, combining strength and art. For lawns, churches, cemeteries. Send for FREE CATALOG. Address **The Ward Fence Co.** Box 625 Decatur, Ind.

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Many designs. Cheap as wood. 32 page Catalogue free. **Special Prices** to Churches and Cemeteries.
Coiled Spring Fence Co.
Box 403 Winchester Ind.

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FREE CATALOG NUMBER 52.
EUGENE CLINE, 57 DEARBORN STREET, CHICAGO.

PATENT YOUR IDEAS
$100,000 for one invention; another $8,500. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. We advertise your patent for sale at our expense.
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Our 3 books for inventors mailed on receipt of 6 cts. stamps
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PATENTS Watson E. Coleman, Patent Attorney, Washington, D. C. Advice free. Terms low. Highest ref.

20 Post Cards 10c All different. Fine views and comics. Retail up to 5c each. All prepaid with big catalog for 10 cents. 3 cent stamps. BANNER CO., 1071 N. FAIRFIELD AVE., DEPT 5, CHICAGO.

There was a young farmer whose pay
was good,
He did everything the best way he could—
He rolled up his sleeves
Half way to his knees
And beat everybody in the neighborhood.
W. J. B.

◈

NOTES FOR FARMERS

Sharp tools make work easy.

Plant flowers all along the home paths.

Set out fruit trees on that rough, rocky hillside.

Don't let thorns and briers grow along your pathway.

The farmer who keeps things moving is bound to get ahead.

A good home, free from debt, is worth many a hard day's work.

Successful farmers don't work for other people and neglect their own business.

Gathered around the hearth at home is the best place for boys and girls at night.

Put in more time on the farm, and less at the village store, and see if it doesn't pay.

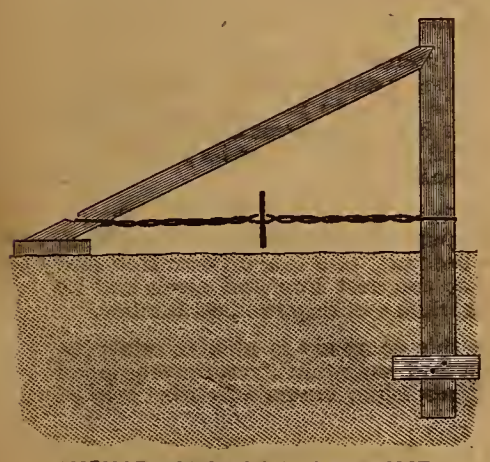
If apple trees bearing cider apples are growing in your fields, trim them and have them grafted.

Marvin L. Piper.

◈

ANCHOR POST FOR WIRE FENCE

The anchor post illustrated cannot be pulled over by any strain to which the fence is subjected, and does away with



ANCHOR POST FOR WIRE FENCE

one post. Put a block of wood or a flat stone on the ground under the end of the brace, and twist the wire until it is tight. G. W. Coffin.

◈

FRUIT GROWERS' MEET

Winter meetings of the various horticultural societies, national, state or county, are always interesting; but it is not often one has the privilege of attending such a gathering as was that of the Western New York Horticultural Society at Rochester, New York, in the latter part of January this year.

This is by far the grandest body of fruit men ever organized. It has the right kind of leaders with such men as Wm. C. Barry, president, a worthy son of his worthy sire; Patrick Barry, whose name is familiar to every fruit grower in the land, and John Hall, the secretary, who is never caught napping. It has a membership, over a thousand strong, of intelligent, progressive soil tillers, many of whom, from the sale of their fruits alone, have an annual income of from two to fifteen thousand dollars, and in some instances of twenty-five thousand dollars or more.

It has the aid and active co-operation of the best-equipped experiment station in the country, that at Geneva, and of Cornell Agricultural College at Ithaca, with all their men of fame and learning, constituting the most accomplished corps of investigators and experimenters. Thus this organization or combination is enabled to make a display of fruits at the exhibit which regularly accompanies the Rochester meeting, which puts anything in the shade that has ever been attempted in this line as a mere side show to a horticultural meeting. Doctor Jordan's claim that the display of apple varieties made by the Geneva station, of which he is director, cannot be duplicated anywhere in the world is probably well founded.

That many fruit growers from other sections—Ohio, Michigan, Illinois, Pennsylvania, Virginia and West Virginia, eastern New York and the New England states, and from sections perhaps still further away, and of course from Canada—frequently and even regularly attend this meeting is only to be expected. But many more should come, and many fathers even in this state should bring their sons to learn the lessons here so impressively taught to the fruit grower, and to learn to understand the intricacies of their chosen profession. As I have often said, the attendance at these meetings for a number of years is to the apt student worth as much as a course at an agricultural college. Go and take your son or sons. If you can't go, send your son anyway.

◈

PLANTING FOR QUICK RESULTS

One of the most instructive and suggestive addresses with which the fruit growers at Rochester were favored was that on "Dwarf Apples in Commercial Orchards," by Mr. Geo. T. Powell, of this state. It was only incidentally that he referred to the use of dwarf apple trees for home planting; but this phase of the subject seems to me worthy of greater consideration and elaboration.

The man who enters upon the task of building a new home, if he cares at all for rural comforts and wants to make the best use of his privileges, must be anxious to get his supply of fruits from his own bushes and trees at the earliest possible moment. He can easily get strawberries, raspberries, currants, gooseberries, grapes, etc., within two or three years' time. He can get peaches in three or four years from planting the trees, and plums soon after, especially if he plants the Japanese varieties. But when he plants the ordinary standard apples he must expect to have to wait twelve, fifteen, perhaps more years before he can get a supply of apples worth mentioning.

Why not make use of dwarf trees in such cases? Home planters seem to have forgotten that there is such a thing as a dwarf apple tree. We might learn something from the people in France, in Germany, in England, etc., about growing apples and pears within two or three years from planting, by means of selecting suitable stocks for the trees, and of proper pruning and training.

We have two kinds of dwarf apple trees—one on paradise roots, which is a true dwarf, the other on doucin roots, which is a half dwarf. The former makes but a small root growth, comparatively, comes into bearing the third year or so, and is good for eight or ten years. The tree on doucin stock grows larger, perhaps sixteen or eighteen feet high, comes into bearing when five or six years old, and is good for twenty years or more.

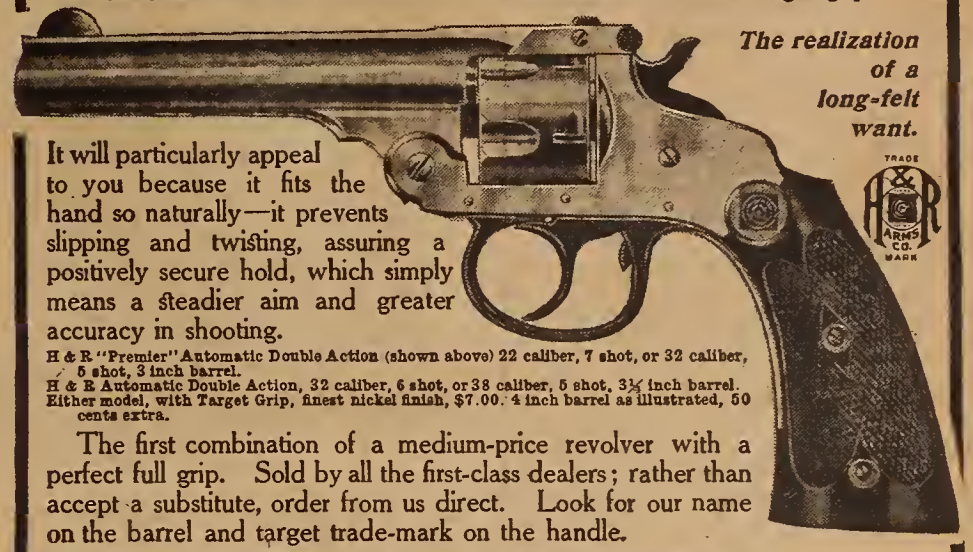
The true dwarf tree requires but little room. European gardeners usually plant them six feet apart. The distances, however, and the mixed planting also, which Mr. Powell recommended for commercial dwarf orchards, are probably quite well adapted for the home fruit garden. The tree rows are to be twenty feet apart. Trees on doucin stock are set twenty feet apart in the rows, with a tree on paradise root midway between each two half dwarfs in the row, making the distance from tree to tree ten feet. This will give more than fifty trees to a quarter acre of ground, and plenty of chance to grow apples galore within a few years' time, and any number of varieties that may be desired, besides. It would also afford the finest chance for testing new varieties, as several of them could be top worked into a single dwarf tree, and give fruit within two years.

The spaces between the rows, twenty feet in width, are not lost, either. A row of grapes, of raspberries or blackberries, or two of currants and gooseberries, may be planted between each two rows of trees, or the ground may be used for any cultivated garden crop, such as cabbage, potatoes, celery, beans, beets, tomatoes, cucumbers, squashes, etc.

The possibilities of an acre, a half acre, even a quarter acre, thus planted are great, but seldom fully realized. A vast amount of comfort, of enjoyment, of pleasurable excitement is awaiting those who learn how to utilize them. And my prediction at this time is that Mr. Powell's talk about dwarf apple orchards will result in a great call for and renewed planting of these dwarf forms of apple trees. T. Greiner.

The New Target Grip

The first opportunity you have, just step into any hardware or sporting-goods store and ask to see an H & R Revolver with this new target grip.



The realization of a long-felt want.

It will particularly appeal to you because it fits the hand so naturally—it prevents slipping and twisting, assuring a positively secure hold, which simply means a steadier aim and greater accuracy in shooting.

H & R "Premier" Automatic Double Action (shown above) 22 caliber, 7 shot, or 32 caliber, 5 shot, 3 inch barrel.
H & R Automatic Double Action, 32 caliber, 6 shot, or 38 caliber, 5 shot, 3½ inch barrel.
Either model, with Target Grip, finest nickel finish, $7.00. 4 inch barrel as illustrated, 50 cents extra.

The first combination of a medium-price revolver with a perfect full grip. Sold by all the first-class dealers; rather than accept a substitute, order from us direct. Look for our name on the barrel and target trade-mark on the handle.

H&R REVOLVERS *Send for Illustrated Catalogue*

HARRINGTON & RICHARDSON ARMS CO.,
454 Park Avenue, Worcester, Mass.

A PRIZE FOR YOU

TWO BEAUTIFULL FULL SIZE 16x20 PICTURES AND A PACKAGE OF TEN HANDSOMELY COLORED POST CARDS GIVEN FREE TO ALL ANSWERING THIS ADVERTISEMENT IN GOOD FAITH. WRITE TO-DAY.

Wouldn't you like a **PRIZE** of these handsome, elegant, attractive set of dishes? Of course you would. The set consists of 42 **pieces** embellished with **YOUR INITIAL IN PURE GOLD,** making the whole set the pride and joy of every housekeeper fortunate enough to possess it.

YOU CAN WIN THIS PRIZE AND IT WON'T COST YOU A CENT TO GET IT. We are giving these dishes away and this advertisement tells you exactly how you can obtain them without money and without price. Think how nice to have this dinner set in your china closet! Think how *proud* you can feel to have them on your table when company comes!

SPLENDID PRIZE! THIS 42-PIECE, GOLD MONOGRAM DINNER SET CAN BE YOURS IF YOU ACT UPON THIS OFFER PROMPTLY.

This set is just as shown in the illustration. This daintily decorated, embellisbed, gold initial dinner set, elaborately decorated with wild roses with green leaves and foliage, *every piece trimmed with coin gold*, the next thing to Haviland china, which is owned by multi-millionaires, equal to a set costing many dollars in your local stores—this **PRIZE PREMIUM** is **YOURS** for a little of your leisure time. Your initial in *gold* is put on as shown above. This dinner set will be the pride of your home and you can **WIN** it without going outside of your house to do it.

AN EXTRA PRESENT FOR PROMPTNESS. Act promptly upon this offer and **WIN ANOTHER PRIZE** of a beautiful 8-piece **SILVER PLATED TEA SET**—cousisting of six teaspoons, a sugar shell and a butter knife, haudsomely plated wltb coin silver.

You can easily win **BOTH** of these valuable prizes. One lady writes: "I am very much pleased with my prize set. It is very much better than I ever expected to get. Any one can see for themselves by looking at the set I received that there are no cheap articles put out by you."

Another lady writes: "Received prize set O. K. Am very much pleased with it. It is much nicer than I thought it would be. I thank you very much. I am going to earn another set."

BY MY PLAN ANY ONE CAN SECURE BOTH THESE BEAUTIFUL PRIZES JUST LIKE THESE LADIES DID.

HOW TO GET THESE PRIZES

Just fill in carefully the coupon below and send it to me, and I will take pleasure in writing you just what to do. I have such a *splendid, liberal* proposition to make to you that I know you will be delighted to have a chance to get an elegant, beautifully decorated **42 PIECE GOLD MONOGRAM DINNER SET** and the handsome tea set plated with Coin Silver, when you see how easily it can he done.

BEAR IN MIND these two Prizes are given away. Don't forget that we give *Two Grand Prize Premiums* instead of one, and that as soon as we get the coupon we send you Two beautiful, richly colored **PICTURES** and a set of **ARTISTIC COLORED POST CARDS** absolutely free. Don't delay. Write at once. Address

M. A. JOHNSON, Mgr., Warren, Pa.

FREE COUPON

M. A. Johnson, Mgr., Warren, Pa. Date.....

Dear Sir:—I would like to secure a 42 piece Gold Monogram Dinner Set and a handsome silver plated 8 piece Tea Set. Please send me full particulars.

Name.....

Address.....Dept. 116.

$37.50

Hickory wheels. Hickory reaches—donble braced. 24x54 body. 15-16 in.steel axles. Oil tempered springs. Rolled steel body loops. Leather quarters in top. Leatherette trimmed. Donble braced shafts. Storm apron. Painting guaranteed. At our factory, Chicago Heights..... **$37.50**

CERTAINTY vs. GUESSWORK

You might just as well have the **REAL** facts about the rig you buy. The price of any buggy is much too much to pay for just shine—a lot of varnish over questionable woodwork and cloth over a back and sides of seats that are not well fitted and braced.

How can any seller know what's behind the paint and upholstering unless he sees the rig made?

We are the **only** Catalogue House owning their own vehicle plant. We know what is in the wheels, the shafts, the body, the gear woods, the top, the seat and back.

This accounts for our sales of **20,000** vehicles a year, and **Our 2 Year Warranty** and **Guarantee of Satisfaction.**

It's a **Square Deal** with us while we make them—a square deal **for you** when you buy them.

$50.00 Auto Seat

Body with hardwood sills. Triple braced seat back. Long distance axles. Double reaches, double braced. Rolled steel loops. Oil tempered springs. Full circle fifth wheel. 7-8 hickory wheels. Donble braced hickory shafts. Hand painting. Wrench. Cloth upholstering. **$50.00** You can't touch it elsewhere for **$65.00**

Send for Special Catalogue—300,000 Ready **A Great Book.** It contains the most open, down-under-the-paint illustrations and descriptions ever given on vehicle work. **Send for Copy Today**

Will save you $20.00 on a Buggy Purchase. Do you know that many manufacturers only have one grade of material? Their $60 buggy is their $40 rig with a little more paint. **Read about it in our book. A postal will bring it.**

Montgomery Ward & Co., CHICAGO and KANSAS CITY

48 **Runabouts, Buggies, Surreys, Spring and Farm Wagons**

TURNING THE SEED POTATOES OVER

"Coming back on the farm this spring! That's great! But then it's what I expected you would do. I knew you never would be happy until you got there again!"

That made my own heart bound, too. I knew the young man, to whom grandfather was saying this, had good reason for the faith that had been in him all these years. So when the little visit between the two was over, I asked him about it. With a twinkle in his eye, the old man, now well along toward life's sundown, said:

"I never will forget the first farm work that boy did. I was visiting at the farm, and thought we would plant a few early potatoes in the garden. So I got the seed and cut it. The little fellow, then not more than five years old, watched the proceedings with a great deal of interest. Then I dropped the pieces, and somehow he took the notion into his head to turn the pieces all over so that the sprouts would be uppermost. That gave him business. Every piece that dropped he picked up and placed the cut side down carefully. The way he did it, chattering all the time like a little bird, made me think he would do everything he did just the best he could.

"Well, he stayed on the farm until a young man, and then went away to school and fitted himself for the work of teaching. He made a good teacher, too, but all the time I could see that he had a longing for the old farm. It cropped out in the letters he sent home. One time he wrote: 'I like to think of the nice fields we cleared in the upper pasture. We had some good times up there, where it was so still!' It looked as if the noise of the world was beginning to worry him, as it does a great many who go out into it and get tired, so that we wish we could find a place to stop and get away from the hustle and bustle. Again he wrote: 'I like the cattle and the horses. They are honest!' It seemed as if he was finding out that many of the world's folks are not quite honest, didn't it?

"And then when vacation time came, and he could get away from its cares, he would streak it for home and help his father, as happy as could be. Oh, you could see that he loved the farm. And the way he turned the seed potatoes over was just like the way he did all kinds of farm work. Everything just so thorough and energetic. I always said he would make a first-rate farmer if he got at it; and now he is coming! I'm glad of it! The farm is the best place to live!"

Love for the farm, thorough work from the beginning, energetic methods—these ought to make a man a success as a farmer, ought they not?

So we sat there with the spring sunshine coming down over us and thought it all out. Here are some of the things we agreed on:

The man who wants his boys and girls to love the farm must make the farm lovable. Children are quick to know when their parents love farming and when they are simply enduring it as they would a term in a reform school or prison somewhere.

And then it pays to take time to start the boys right in their way of doing farm work. You rarely see a good farmer whose father is slipshod in his methods.

Again, grandfather and I agreed that once a love for the farm is well grounded in a boy he is not very apt to be satisfied very long at any other kind of work. The heart will turn back to the farm. Out in the world there are many things that tempt the young man. Its hustle and bustle sound so charming to him! It seems so still back on the farm after one has made a visit to town!

But try it and see how it really compares with the farm! In a few years the fascination grows dim. There is a never-ending push about city life that wears the heart out. It may give a man the handling of a little more money, though not so much really sticks to the fingers in the long run. Money isn't life, anyway. It takes more than a million dollars to make a life. It seems sometimes as if some of the broadest, most helpful lives are those that are most always cramped a little for money.

And finally we thought it out that little things show the drift of a man's life. It was a small thing to turn those seed potatoes all over, sprout side up; but it told something about the possibilities of the boy's nature. Doing things right—that is the lesson. I wonder if that is the way every boy and young man who reads this is doing his work?

Stop a minute and think about this.

Edgar L. Vincent.

Put your shoulder to the wheel and help a good thing along. Celebrate "Farm and Fireside Day," March 31st, by sending in two new subscriptions to Farm and Fireside, and we will show you our appreciation.

RIPE grain waits for no man.

The loss of golden hours in the field means the loss of golden grain and the loss of golden profits.

So the profits that *you* make from *your* grain depend upon your harvesting machines.

Trouble and tinkering, breakdowns and delays through *unreliable machines* would mean the loss of time and money—would mean needless expense and worry.

You cannot afford to risk your profits on doubtful harvesting machines.

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Because *you know* the machines you can *always depend upon*.

Since the click of the first reaper—more than *two hundred* concerns have offered harvesting machines to the farmers.

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Through these years of "testing" the farmers found the best and placed their greatest confidence in six machines.

You know the machines that have earned first place through this test of time.

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Deering, Milwaukee, Plano,
Harvesting Machines

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—Because they are right—
—Because they have always done the best work—
—Because they have always satisfied their users—

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Today these machines are more popular than ever.

This means that they have steadily led in improvements from year to year, thus holding the place they have established as the standard.

In order that these machines shall continue to be the best, the International Harvester Company pays more than $350,000 a year to more than two hundred men in its Department of Improvements.

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Care of a New York Vineyard

MANY entertain the idea that a vineyard needs but little care, thinking that about all that is necessary is to keep the vines tied to the wires and to pick the grapes. This idea is obtained from their experience with the old grape vine in the back yard, which runs upon its trellis and up into the pear tree. A successful vineyardist works in his vineyard at all seasons of the year. The amount of care necessary is immense.

The methods employed in the care of vineyards in different sections vary somewhat. The following article deals entirely with the Keuka region, comprising the vineyards in the locality of Lake Keuka, New York, formerly called Crooked Lake. This is one of the prettiest of the finger lakes of central New York. Sloping back from its shores are some ten thousand acres of vineyards, which produce from fifteen to thirty thousand tons of grapes annually, according to the season. One grape grower near my home picked from a little over six acres of vineyard between seventeen and eighteen tons of fruit, netting him between seven and eight hundred dollars.

AN UNTRIMMED VINE

Grapes are profitable if the crop is fair and the market not too low. Taken as a whole, the grape growers of this section are prosperous people. For some ten or twelve years there has not been a failure. It looked the most like it last fall, when the lack of sunshine caused the fruit to ripen very slowly. Some growers did lose part of their Catawbas, the latest variety. As a usual thing, the last week of picking is a race between the frost and the pickers. Hardly are the grapes in the packing house before frost has turned the leaves a dark brown and caused them to fall.

Then commences the working of the vineyard to get it in shape to do its best the next season. The vines are set in rows from six to ten feet apart. Between these the farmer drives and plows up the earth, turning it toward and around the roots of the vines. This keeps the water from settling around the vines, and during the spring thaws it will also keep the rivulets from uncovering the roots. In this section the greater part of the soil is clay, and the fall plowing breaks this up into large lumps. Thus it is more easily weathered, and in the spring is more mellow and easier to work.

As soon as the plowing is done, the trimming of the vineyard is on hand. This can be done as soon as the sap ceases to flow in the fall, or during the winter and early spring. The pruning of a vineyard is a science not known to all. Many a vineyardist hires a professional trimmer, not daring to attempt it himself. In pruning a vine it is necessary to cut it back so as to leave only two, seldom three, prongs of new cane, from eighteen inches to four feet in length, and the parent stock. The difference in the length left depends on the character of the soil, which causes the differences of length of cane between buds. From four to eight buds are left. The next spring new shoots will come from these buds, and the new growth bears the fruit of each season.

The close cutting back causes for next season a more vigorous growth of wood and gives it a chance to mature before the frost—that is, allows it to get hard, so that it and the buds are not injured by the cold. The close trimming also gives the vine more of a chance to put its strength into the producing of fruit, thus ripening the fruit earlier and giving it a better flavor.

It is essential, when trimming, to cut away old wood and give the new growth a chance. If a shoot or sucker has started near the base of the parent stock, it is cared for, and the old stock is sawed off near the ground. This new shoot develops and answers the same purpose as a new vine, only it does not take as long to come into bearing. It is necessary to keep the parent stock small, or else it will use up so much of the sap that it will not develop and ripen the grapes.

Last year one of the best growers near my home pulled up an old vineyard and set out new stock. The old stems were many of them three inches in diameter. The vineyard was about twenty years old. The shoots from the base had not been allowed to develop, and the growth of grapes was growing poorer each year. In light, loamy soil much more old wood is allowed to grow.

In pruning, canes are often cut which are fifteen feet in length. After the cutting, it is next necessary to pull the brush. This consists in pulling the canes, which have been cut off, from the wires on which the vines are trained. This is no easy work, pulling and yanking at brush all day. The brush is usually thrown down between the rows. In early spring, as soon as the snow is off, it is taken out with a brush rake and left at the end of the rows. A brush rake resembles one

PULLING THE BRUSH FROM THE TRIMMED VINES

BUNDLES OF BRUSH TO BE USED FOR CUTTINGS

"Coffee Raising in Hawaii"—Next Issue

half of an old-fashioned, wooden, revolving hay rake. Most of the brush is burned, causing in the spring several weeks of smoky weather. Some vineyardists pull their brush very carefully and bind it into large bundles. These are taken to the packing house and cut into cuttings, pieces of cane from eight to twelve inches in length, with three or four healthy buds.

These cuttings are put into the ground in the spring very close together, and during the summer months start roots. The next spring the yearlings, as they are called, are used in starting new vineyards. The cuttings are shipped to all parts of the United States, some even being sent to France and Australia. The preparing of these is a profitable winter occupation.

The vines are all trained on three wires, which are fastened to posts set from ten to fifteen feet apart. As soon as the frost is out of the ground, the posts are tightened and the poor ones replaced by sound ones. The vineyardist puts a raised platform on his stone boat and drives between the rows, giving each post two or three blows with the mallet.

The wires are made taut, after which the vines are ready for the first tie. For the good of the vineyard, this ought to be done before the buds start. The loose ends of the cane are made fast to the lowest strand of wire, usually with slender willow sprouts from two to three feet in length. This is called willowing. Some tie the first time with fine wire, but most growers prefer the willow. Later, after the new growth is ten to fifteen inches long, it is tied to the second wire with green rye straw. In the early summer the new canes are once more tied, this time to and along the top wire with straw. The vineyard is tied three times each season. A great deal of the tying is done by women and girls.

When the soil is in condition to work, the vineyard is again plowed, and this time the ground is thrown away from the roots. Then it is harrowed between the rows. All summer, up until the middle of August, the best growers cultivate their vines just as much as they would a piece of corn. The hoe is often used for work near the base of the stock. The vineyard must be kept free from weeds. To be sure, all do not take this amount of care, neither do all get good yields of fruit.

Another implement which has come into universal use in vineyards during the past ten years is the sprayer. Spraying has become necessary, in order to save the fruit from the rot. The Bordeaux mixture is commonly used. The first time over is before the new growth starts. This kills many of the germs in the bark of the old wood. The next most important time is when the vines are in full bloom. As a usual thing, the spray is used four times during the season, the last time being when the berries are nearly full grown.

Good cultivation and thorough spraying bring good yields. Neither the cultivation nor spraying can be omitted. After the grower has done his part he has to patiently wait the course of events, to see whether or not he is to have his crop. A wind and hail storm will ruin the year's growth in a few minutes. A moist, hot, cloudy August will bring on the rot and mildew. A cool, cloudy August and September, such as we had last fall, will retard the ripening until the presence of frost is felt in the air. Grapes will withstand a moderate drought without injury. What is needed is plenty of sunshine, not too hot; then the fruit will ripen and sweeten.

Nelson A. Jackson.

SOWING CLOVER SEED

There seems to be more money thrown away in trying to get a clover crop, especially on our sandy soil, than on any other crop. The time of sowing the seed in this locality is between the middle of February and the first of May, all using their best judgment in regard to the proper condition of the ground, etc.

I, like most of my neighbors, had been sowing from ten to twenty dollars' worth a year broadcast over my farm, and have seen the farm get poorer and poorer each year. So four years ago I thought I would try something different. I waited until the ground got dry enough to harrow—just about the middle of April—and then went onto the wheat with a sharp-toothed harrow with the teeth straight, and gave it a good harrowing the same way it was drilled. I sowed the clover seed, and then went crossways with a weeder—or one could use the harrow if he had no weeder.

It made the wheat look sick for a while, but it soon recovered, and looked better for it. I have used this method since, and have good crops of clover every year.

For all other crops the farmer raises he prepares the best seed bed he can, and has the seed covered, and why should he make an exception with such an important crop as clover? G. L. Darrow.

What a Home is Worth

It Takes a Month or Two to Build a House; Years to Build a Home

You can build a house in a month or two. It takes years to build a home. A neighbor of mine owns a piece of ground—three quarters of an acre—and for the past thirty-five or forty years has fitted this up for a real home. His "cottage" is surrounded by miscellaneous fruit and ornamental trees, small fruits, shrubbery, flowers, etc. He has tended to his plantings with tender care and affection, calculating to spend the balance of his days (he being about sixty years old) amid congenial surroundings. He would not care to sell his "home" at any price. All he wants is to be let alone.

Now a new railroad is to be built, and the line runs right through this man's premises. His home is to be taken away from him. The railroad people offer him a fair price for his house and lot, but they seem to have little appreciation of the value of his "home" and his plantings. He refuses to sell at the price offered. So would I under the same circumstances. In the course of condemnation proceedings a commission has been appointed to fix the proper valuation. My neighbor calls on me for giving expert evidence concerning the value of the trees, shrubs and flowers on the place.

I first examined the trees and shrubs, to settle on their commercial value, meaning their value in view of the average annual revenue received from them. Here is the list:

7 apple trees at $50	$ 350
3 pear trees at $50	150
2 pear trees at $30	60
6 sweet cherries at $25	150
15 sour cherries at $20	300
1 quince	20
1 peach	20
2 maples at $50	100
11 grape vines at $5	55
11 currants at $5	55
7 gooseberries at $5	35
2 rows raspberries, 60 feet long	10
Old strawberry bed, 25 by 60 feet	5
Asparagus bed, 300 plants	15
	$1,325
Snowballs, lilacs, rambler roses, other roses, deutzias, flags, honeysuckles, clematises, peonies, spiræas, hollyhocks and other flowers and shrubs	175
Total	$1,500

Allowing one third off for losses, by age, winter kill, insect depredations, etc., I believe these trees, shrubs and flowers to be worth, at a fair commercial rating, not less than one thousand dollars. In other words, if this plantation had been managed with an eye to the sale of the product alone, it would have yielded ten per cent, more or less, on a thousand-dollar investment.

I feel that this statement is very moderate and conservative. Professor Hedrick of the Geneva Experiment Station found that an acre of the Auchter apple orchard under his care has given an average annual return of ten per cent on one thousand dollars, and the returns for fruit sold from two acres of Bartlett pears belonging to my neighbor J. J. Hopkins have seldom been less than one thousand dollars a year, which would make one acre of his Bartletts the equal of five thousand dollars invested at ten per cent, as a revenue producer.

WHY THE HOME BUILDER PLANTS TREES

But the home builder does not plant merely for the purpose of selling the product. He has higher, nobler aims. He plants choicer fruits, and a far greater variety of them, requiring greater skill in selection and management and a larger original expense. He plants for himself and for his family. The object sought is the full and perfect enjoyment of home life. He wants fruit for the table in the greatest variety and unbroken succession, the poetry and perfume of the flowers, in short the noblest gifts of Nature directly from her own hands, with all the sparkle of freshness, untainted and uncontaminated. He wants the hygienic effect of a diet consisting to a large extent of wholesome fruits and vegetables, and the satisfaction of having the best of everything in its season. All these things easily add another one thousand dollars to the mere commercial value of the plantation. This estimate is by no means extravagant, either.

Editor Collingwood, at the last monthly meeting of the Niagara County Farmers' Club, related an instance of a man in Massachusetts who sixty years ago cut down a magnificent orchard of apple trees simply because the only use he could make of the fruit at that time was for turning into cider, and he did not want the hard cider around. This man's grandson now has an apple orchard of twelve-year-old trees, and he makes a business of selling these trees to wealthy home builders not far from Boston, at seventy-five dollars a tree, he to take the trees up and replant them on the buyer's place.

TYING THE TRIMMED VINES WITH WILLOWS

Of course, the wealthy city man might buy apples in the open market at a mere fraction of what it will cost him to raise them on these newly transplanted seventy-five-dollar trees; but the whole transaction shows how highly he values the privilege of gathering the fruit with his own hands, from his own trees, and showing them to his friends and visitors as fruit of his own growing.

THE TREE HIS FRIEND

There is still another side to this question. The tree which a man has planted, and petted and nursed for a period of ten, fifteen, twenty, thirty or forty years, has become a part of that man's life. He would try to protect it with all his energies, and grieve if any harm should befall it, almost as he would grieve over any harm that would come to any member of his family. His interest will center in the things that he thus has planted and cared for. He may visit them daily as he would his best friends. He enjoys their shade, and partakes of their generosity and hospitality during the fruiting season.

More than thirty years ago I planted and grafted a number of trees in another county. Twenty years ago I planted, experimentally, some trees in New Jersey. Whenever I now come into the same vicinities again I invariably hunt up these old friends of mine and have a visit with them. I examine and enjoy the new growth they have made, and their thrift and general welfare.

In my neighbor's case we have that of a man sixty years of age who has planted a home place, and cared for the trees, shrubs, flowers, etc., until they have taken deep root in his affections, in his very heart and soul, and have become an essential part of his very self; a man who for forty years has been busily engaged in fixing up his home and surroundings to suit his own particular individuality and notions, a place in which to spend the few remaining years of his life in close touch and association with his tree and plant pets. Drive him out of this home and you take away the best he has, everything, in fact, and cast him adrift without hope, for his remaining years will not allow him to retrieve his loss and rebuild the lost home. I feel the absurdity of the proposition when I make a further allowance of only one thousand dollars to be added to the value of this home planting for the personal associations it contains for its owner. No amount of money can fully compensate him for that loss.

The very lowest estimate, for the reasons here given, which I would give of the value of the trees and shrubs and flowers on these three quarters of an acre, aside from the land and the buildings, would be three thousand dollars.

It is only now and then, however, that a person is forced out of his home in the manner related. Most people may undertake to fix up a home of their own, and fit it up to their notions and desires, without fear of ever being disturbed in its possession. The whole story tells, however, what you can make of a place in the course of time by comparatively little, although continuous, effort, and what enjoyments you can get out of it while making it. Incidentally, too, it shows the great advantages of country over city life.

T. Greiner.

FARMERS SHOULD TEST THEIR SEED CORN

During the past two months members of the experiment station have made a study of the seed corn of the state, and find the vitality of much of it to be in a serious condition. The unusually cold, wet season of 1907 did not allow the corn to mature and dry out before the time of frosts. In the early part of October much of the corn of the state was still in a very moist and immature condition, and the series of hard freezes which came at that time materially injured the vitality.

The result of these conditions is that those corn growers who depended on late-selected seed are now finding, upon close examination, many ears of questionable vitality. For these reasons all seed corn should be specially selected and thoroughly tested. A test of each individual ear should be made, and all weak or dead ears should be discarded.

This test can be made in several ways. The following is suggested as a reliable and satisfactory one:

Take a box made of inch lumber and of any convenient size, say about two by three feet and three inches deep. Through the ends and sides, about two and one half inches from the bottom, bore small holes two inches apart. Through these holes string a light galvanized wire, which will divide the box into squares two inches to the side. Then fill the box with garden soil or sand and it is ready for use. The ears should be laid on the floor or racks in a row, so they can be numbered. From ear No. 1 remove five kernels, each from a different part of the ear, and place these in square No. 1; remove five kernels from ear No. 2 and place in square No. 2, and so on until all the ears have been tested. After placing the kernels, moisten the material in the box thoroughly, and cover with a glass or a rug, to keep the surface from drying. Place the tester in a room of ordinary living-room temperature, or about seventy degrees Fahrenheit. After five days examine the corn, and any ears that fail to show a strong germination of the kernels should be removed and discarded.

This method of testing corn is simple, convenient and rapid, and means much in securing strong, germinable seed. Only fourteen ears are required to plant an acre of ground. With an average yield each ear means five bushels in the fall. When a man can test five to eight bushels in a day, and locate definitely all weak or bad ears, can he afford to neglect this important step in the preparation of his seed corn? G. I. Christie.

Purdue Experiment Station.

FARM JINGLES

The man who does not borrow,
May gain thereby to-morrow;
But the man who does not lend,
May lose thereby a friend

A small flock of sheep
Of good stock do keep,
And sell mutton chops a heap.

Now raise all your lambs
Better than their dams,
And you'll be sure to meet
With success in your sheep.

There is a certain Line,
Trains running all the time,
Work train the only kind.
Pay station at all the bends,
Success—the journey ends,
Depot crowded with friends.

W. J. Burtscher.

You can do your neighbors a good turn by getting them to subscribe at the present low prices, and sending the subscriptions to us "Farm and Fireside Day," March 31st.

The Time Schedule

It Throws Light on the Business Management of the Farm

ONE of the most essential things to know in the conduct of the farm is the profit and loss shown by the lines of work carried on. No system of farm records is complete which does not show this. Without knowing, it is easy to grow crops or keep classes of live stock which do not pay or which pay a much smaller profit than others which might replace them.

The determining factor as to profit or loss is in many cases the labor problem. It is easy to put time, and therefore money, where it will not bring an adequate return. A record of where the time has gone, which one can take up and carefully consider, will prove of much value.

I have just been going over some of my own time schedules and considering these problems. The first thing which is forced upon my attention is the fact that they have not been properly kept. One is not likely to get the record to suit him at first, even when he is able to look after it all himself. When it must be left to others, it is still less likely to please him.

I take up one month's record, for instance, and I find "Chores" charged with eleven hours a day throughout the month. Evidently what was thought to be the average amount of time spent in this way was put down for each day, regardless of whether the actual time may have been more or less. This in itself is not so bad, for probably the amount of time did average about the same. The worst fault with this item is that it does not show to what classes of stock the time should be charged. There are represented: 1. The teams. 2. The dairy. 3. The swine. 4. The poultry. These are four distinct lines of the farming enterprise. Some of them may pay and some may not. The amount of labor demanded is an important factor in the problem.

As a matter of fact, at least eight hours of this eleven went to the dairy. About twenty cows were being milked, and I am convinced that the labor cost of caring for these for the year is somewhere in the vicinity of four hundred dollars, or twenty dollars a cow. This will also include the care of the young stock, which properly belongs to the dairy enterprise.

A consideration of the cow census figures being published by "Hoard's Dairyman" and others directly interested in dairying, in connection with this labor cost, raises a serious question regarding the profit from this line of the farm.

It must not be forgotten that the dairy offers one of the very best means of keeping up the fertility of the land—a very important matter. Not long ago I heard a prominent professor of dairy husbandry make the statement that very often the dairyman must be content to exchange his labor for the fertilizer returned to the farm. Notwithstanding the fact that wherever dairy farming is practised there are found the most productive farms, I question whether four hundred dollars a year is not too high a price for me to pay for this fertility. Will not this money invested in clover seed, to bring nitrogen, and chemicals, to bring phosphoric acid and potash, bring greater return? How does the problem look to you, reader, on your own farm?

The labor cost alone will not enable me to answer this question. I must know more about what these cows are consuming, and compare it with the returns they are giving. How many of our readers will undertake to attack this dairy problem in a businesslike way and give us the result of their experience? If you do not own a dairy, give us the results of some other line. The more figures we can have for comparison, the more we can learn. Let us work together to learn more about our business.

I started to write about time schedules, and have wandered away from the subject; but no matter. Now let us get back to it. The next item on the sheet to which I happen to turn is "Plowing." This also is too indefinite. It is far less important to me to know that this time was spent in plowing than to know what crop it was put upon. Was it corn, oats or potatoes, and which field? I should like to be able to tell what these crops have cost. Perhaps some of the fields have been handled differently, and this difference may have influenced results. If the time schedule gave "Corn," and under that, time for plowing, fitting, tilling, etc., the record would be much more valuable. We must avoid making this matter too complicated, but we want the record to be as complete as it can conveniently be made.

Just below comes the item "Manure," which includes the time spent in cleaning stables and hauling manure to the field. This shows that during the month of April, which happens to be the one before me, eighty-three hours of manual labor and sixty-three hours of team labor were spent in this occupation. Counting this time at twelve and one half cents an hour for each class, which is certainly not too high, the cost of getting the manure to the field during that month was $18.25. Turning to March, I find the record to be somewhat less, being sixty-two hours of manual labor and the same number of team labor. In this case one man worked alone with the team all the time, while in April he had the help of another at times. All manure is hauled directly to the field whenever the weather and condition of the fields will permit. Perhaps bad weather in March had caused a little accumulation to be moved in April. On the same basis the cost in March was $15.50.

I am writing this some fifteen hundred miles from home, and I do not have the schedules for the entire year before me. Evidently, however, I must add another hundred dollars to the four hundred which it costs to care for my dairy, making five hundred dollars in all, which I must pay for the fertility returned to the soil if my cows only pay for the feed they consume, as this dairy professor says so many cows do. If they do not even do as well as that, which is the case with a large proportion of the dairies reported in these various census statistics, I am still worse off. In either case I am paying too much for the fertility. I believe that I can get it for less money in other ways than to care for a cow and her products for the manure which she will produce.

There are still other problems connected with the business management of the farm upon which the time schedule throws light, but perhaps these are enough to discuss at one sitting.

I have tried various plans of keeping this record. It is not always easy to know just how much time each man has spent at the different things during the day. For this reason I tried for a time fastening a card in the barn, with space for a week's time on it, giving a column under each day for each man employed. He was asked to fill in his own time each night. This did not prove altogether satisfactory and has the disadvantage of greatly increasing the number and bulk of records to be consulted in studying over any problem. It also increases the labor of getting the footings.

I have now gone back to the plan of using a sheet of foolscap paper, ruling lines up and down for the number of days of the month, using one side for manual labor and the other for team labor. The total number of hours spent by all men and teams at work upon any given kind of work is placed in the column for the day. Below, any lost time of regular men or time worked by extra men employed may be entered. This calls for but twelve sheets for the year, and it is easy to sum up the records.

Perhaps a cheap book with pages about the size of foolscap would be even better. Possibly some of the printed time books which are used by contractors may serve the purpose. Thus far I have never happened to find a printed form which just suited me.

Try the time schedule for a while, then study the records and see what they will teach you.

FRED W. CARD.

ROCKY FORD CANTALOUP

BURRELL GEM CANTALOUP

THE ROCKY FORD CANTALOUP

In recent years the growing of the Rocky Ford cantaloup has attracted much attention. The value of this fruit can best be comprehended when we realize that just seven years ago the first carload lots of cantaloupes were shipped east; this shipment marked a new era in cantaloup growing. Previous to this time there was no special market for this fruit. Now came a call for the Rocky Ford cantaloup, and this past season over one thousand four hundred cars have been shipped out of the Rocky Ford district.

Commission men sent representatives to Colorado to make contracts for the next crop. The markets in the larger cities were fairly flooded with the cantaloupes, and for several years the glutted markets paid but little for the fruit. In a few years conditions adjusted themselves, the market again reached the normal, and at the present time this industry is indeed one branch of farming that gives large returns for the labor expended.

There seems to be a general misunderstanding as to what the genuine Rocky Ford melon is. The melon was originally the common Netted Gem. Through selection and under the peculiar conditions in Colorado it developed into what is now known as the Rocky Ford cantaloup. In size it should be about four and one half inches long and four and one eighth inches in diameter, the seed cavity small, triangular in shape; meat of a greenish color; the netting on the outside should cover the entire melon and be very prominent.

The Rocky Ford melon now has a new rival in the field—namely, the Burrell Gem, a variety developed by a local grower at Rocky Ford, Colorado. This fruit has been upon the market only two years, and in this short time has won such a favor that it is quoted upon the market at an advanced price over the other melons. This cantaloup is about six inches long and four and one half inches in diameter; the meat is rich reddish orange; the seed cavity is very small and triangular; the netting is not as perfect as the netting of the other class; only the ridges are netted.

At one time this past season the St. Louis market paid $1.85 per flat crate of twelve Gem melons, whereas the others sold at $1.45 per crate of forty-five melons. Whether or not the Burrell Gem will soon replace the regular Rocky Ford melon is a matter of conjecture. From past results it seems that for a few years at least, until the Gems have been selected for better shipping qualities, the Rocky Fords will hold the market. For local market, however, the Gem seems to be superior.

It is a well-known fact that if these cantaloupes are grown in other sections of the country for several years they deteriorate in quality. It is for this reason that many of the best cantaloup growers in Colorado no longer sell the fruit, but harvest only the seed. It has been conservatively estimated that in 1906 ninety thousand pounds of cantaloup seed were harvested and sold.

The net income of an acre of cantaloup varies with the market, but runs from thirty-five to sixty dollars an acre. If the seed is sold, the profit runs about fifteen or twenty dollars higher. Although the seed production is limited to Colorado, there is no reason whatever why individual farmers with a good local market cannot supply the demand with choice fruit. The care and culture are the same as with cucumbers. The idea that some have of preparing each hill separately with several forkfuls of manure is not advisable; a good, rich, mellow soil and thorough culture are the only requisites for growing the cantaloupes successfully.

We would not advise any one to grow a large acreage at once, but begin on a small scale, learn how to grow them (as no one can say just how they should be grown under the different conditions), and as the market develops increase the acreage, bearing always in mind, however, that:

The cantaloup should not be too large; quality first.

The seed cavity should be small; this gives more flesh.

The tissues holding the seed must be firm, so as to prevent the shaking loose of the seed, and thereby hastening the decay of the flesh.

F. KNORR.

FARM NOTES

The whole subject of caring for live stock may be summed up in one word—"comfort."

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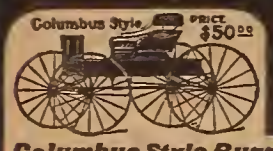

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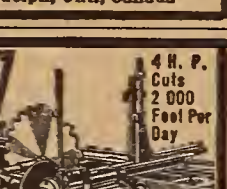

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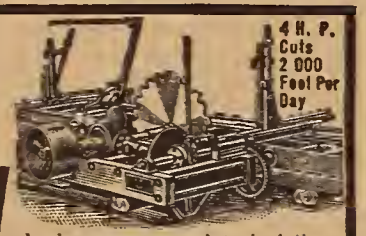

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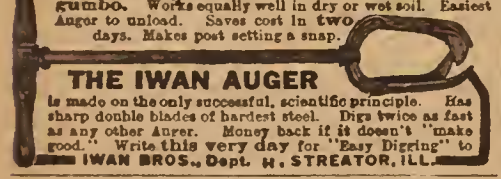

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Review of the Farm Press

GOOD GRASS SEED

All farmers are troubled more or less with weeds, and much extra labor is required every year on the farm on account of them. When a meadow or a pasture becomes too weedy, it is plowed up and planted for several seasons with some cultivated crop, in order to get the weeds killed out before again seeding down. In many cases, contrary to expectations, the newly seeded field is as weedy or weedier than it was before, and we wonder how it all happened. The fact in the matter is that we have sown the weeds with our grass seed and did not know it.

Again, we often get a poor stand of grass, and for want of a better reason, ascribe it to hard weather or bad luck, while the real trouble has been that the seeds have little or no vitality. It frequently happens that dealers will have a supply of old seed left over from the previous year, and in order to dispose of it will mix it with the new seed. Since the vitality of seeds rapidly decreases with their age, the result is a mixture with a low germination test, and when the process is repeated for several years an exceedingly bad lot of seed is obtained.

It is a notorious fact that much of the grass seed offered for sale is of poor quality both as regards its purity and germination. Some preliminary tests made here at the college last spring showed certain commercial samples of seed corn to have a vitality of less than seventy-five per cent, vetch thirty-four per cent, rape fifty-four per cent, timothy twenty per cent, and redtop six per cent. In the various samples of grass seed inspected were found all sorts of impurities, including dirt, sand, hulls, chaff, weed seeds, and other grass seeds, some of which were harmless, but yet constituting an impurity. Among the most noxious and injurious weed seeds that were found were the following: Bitter dock, Canada thistle, crab grass, goosefoot, green foxtail, lady's thumb, ribgrass, plantain, sheep sorrel, yellow daisy and yellow foxtail.

While the purity test is not so easy for the average farmer to make, a sufficiently accurate germination test can be made by most any one. The simplest way of doing this is to count out two hundred seeds and place them between sheets of blotting paper, which are kept moist and in a warm room for five or six days. To determine whether the seed contains any considerable amount of impurities, it may be spread on a sheet of paper or a white plate, and with a little practise one will soon be able to detect the more common kinds of weed seeds and to estimate the amount of them in a given sample under test.—F. W. Taylor in The American Cultivator.

◈

TOO FINE IN THE BONE

For about a quarter of a century we have heard the complaint that the hogs on the farm are too fine in the bone. Hence we find many farmers who are in the market for a coarse-boned hog, in order to correct this deficiency. It may seem to correct it for the first year, possibly for two; but no matter how coarse-boned sires you may use, sooner or later the progeny will become too fine in the bone; not only too fine, but weak and liable to break down before they reach the desired weight in the fattening pen unless the pigs are fed for bone as well as muscle.

The trouble in this case is not in the hogs at all, but in the farmer himself The fact is that he has not been feeding sufficient bone-forming feed. He has been feeding too much corn, perhaps giving too little exercise, and pushing the development of flesh more rapidly than is wise or judicious. The hog cannot work miracles in the way of bone making. It absolutely must have bone-making material, and there is not the required bone-making material in corn alone.

We know of nothing grown on the farm that tends more to the development of bone than alfalfa; and where this is available, either in the form of pasture or hay, it should by all means be given. We know of nothing in the shape of condiments or additional feed for the development of bone that is better than plain cob charcoal, the material for which is abundant in every farm yard, and an hour or two of work will fit it for the purpose.

If you can do nothing better, you can rake up the loose cobs in your yard on a calm day, set fire to them, and let the hogs eat them as soon as they can do so without danger of burning their noses. This will supply bone-making material. The better way, however, is to dig a hole in the ground, start a good fire in the bottom, fill it up with corn cobs, and then before they are reduced to ashes, and while still in the charcoal stage, smother out the fire by excluding the air. Add to this the wood ashes about the place, and some salt, and put this in a self feeder where the hogs can get it whenever they want it. If to this is added wheat, oats or barley so damaged that they have no mercantile value, together with skim milk or buttermilk, there is no reason why the hogs on any farm should be too fine in the bone, no matter what the breed.—Wallaces' Farmer.

◈

COUNTY EXPERIMENT FARMS

If every county with a farming population supported a well-managed experiment farm it would be a good-paying investment for the community. Take, for instance, a single test in corn growing—something that everybody thinks he knows all about—of the Randolph County Experiment Farm, Indiana. Twenty-eight varieties of corn were tested, and the work of the first year alone shows valuable results. While the farms of the county are shown to possess some very valuable strains or varieties of corn for their localities, it is also very clearly shown that a great many of the farmers are carelessly growing varieties not of the highest producing power; also that most of the imported varieties did not produce so well as the home-grown varieties.

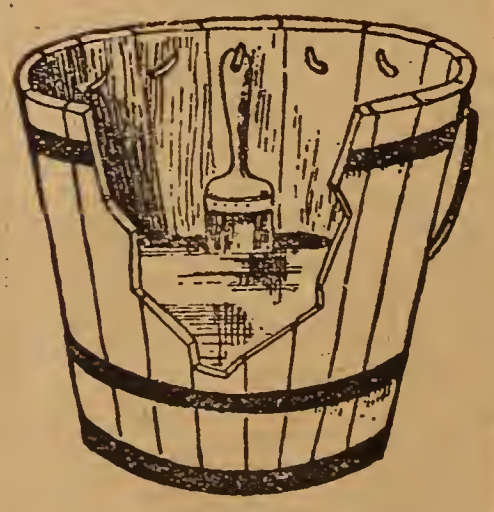
Nearly all, if not all, of the various state experiment stations are doing helpful work for the farmers of their respective states; but the work of no single station can possibly cover or be taken as a safe guide for all the varied conditions found in the state. The county experiment farm comes much nearer to meeting local conditions. It would naturally work in co-operation with the state experiment station and with the national Department of Agriculture.

North Dakota has not attempted to establish county farms, but she is working along these lines with the recent establishment of six demonstration farms in different parts of the state. Five years' work has been mapped out for these farms, the object being stated to be, in each case, to determine what crop rotation is best for that particular neighborhood, in order to build up the soil fertility. —Guy E. Mitchell in The American Cultivator.

◈

CARE OF PAINT BRUSHES

One is often at a loss to know how to keep paint brushes from getting hard. A writer in the "American Blacksmith" gives a good plan, and says: "We took a common candy pail, which we secured from the grocer, and painted it inside and out with two coats of paint. We then put a row of hooks on the inside of the



PAIL FOR HOLDING BRUSHES

pail about two or three inches from the top. When through using a brush we simply hang it in the pail, into which a sufficient quantity of water has been poured to just cover the bristles. It is well to say that to place a brush in water before it has been touched by paint is to ruin it. The water will make it soggy and practically unfit for use in painting.—Iowa State Register and Farmer.

◈

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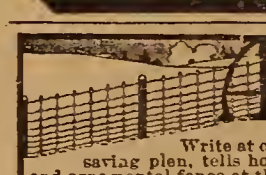

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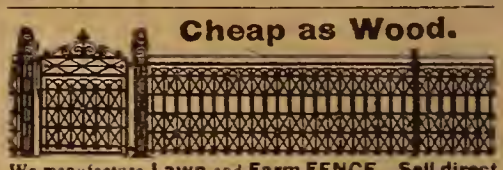

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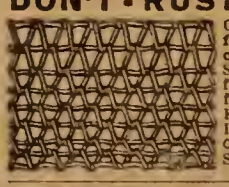

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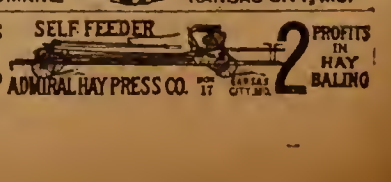


ADMIRAL HAY PRESS CO.

Review of the Farm Press

FEWER ACRES—MORE CORN

We have now reached a time in the agricultural development of the West when it is necessary to decrease the acreage of corn, and aim not to grow many acres, but fewer, but all the while growing as much corn or more on fewer acres than we did heretofore on the many.

One of the great temptations that besets average farmers, and especially the more ambitious ones, whether owners or renters, is to spread their efforts over a large acreage. There was a time, when land was cheap and very fertile and labor cheaper than now, when this large acreage was perhaps justifiable. That time has gone by. When land is worth from sixty to one hundred dollars an acre the farmer cannot afford to skim over it, to neglect the plowing or the preparation of the seed bed or the selection of the seed, either for variety, quality or germination. He cannot afford, in plowing, to give it a lick and a promise, and quit the fourth of July, whether the corn needs further cultivation or not. He can no longer afford to grow corn year after year and husk thirty bushels when he ought to have sixty. He cannot afford to scatter a little manure over the corn field once in a while and none on the pasture, nor can he afford to neglect the disking before plowing, nor the careful preparation of the seed bed.

We are now at a time when rotation of crops is an absolute necessity; when much of the land must be kept in grass, and when the manure must be applied to the grass land in order to increase the yield of hay and pasture, and at the same time increase the root development of the plant, thus adding more humus to the soil.

Many farmers are complaining that they cannot get hired help to cultivate the accustomed acres. Our advice to them this year is to put a large part of their acreage in spring grain of some kind, not neglecting the preparation of the seed bed, and seed it down heavily to clover and timothy. Then instead of eighty acres grow sixty or even forty acres of corn, always on sod or the first year after sod when it is possible.

There are hundreds of farmers who last year grew sixty, seventy or eighty bushels of corn; but these men did not have a large acreage. They planted it on sod; they took every precaution against insect pests by fall plowing and thorough preparation before planting. Consequently they have made a good deal more money than those who have been fooling away their time on large acreage and growing twenty-five or thirty bushels to the acre.

Landlords must learn this lesson as well as tenants. They must understand, and they may as well understand it now, that they cannot go on making money, getting large profits from their land, farming on the shares, as they have been doing the last three or four years. It will be necessary for them to select tenants who will be satisfied with fewer acres of corn; and in order to induce them to be so, the landlord must seed down heavily this spring with the clovers and other grasses, urge their tenants to secure the live stock needed to consume these grasses, and thus lay the foundation for permanent prosperity in years to come.

This is a good year to begin reformation. We must not expect as high prices for either corn or live stock for a year or two as we have had in the past. Therefore, to make things come out even, we must save in the labor bill and must use the home labor to the very greatest advantage, like a hen spreading herself to cover eighteen or twenty eggs when she can comfortably cover only thirteen. We must get down to real up-to-date scientific farming. Many farmers shrug their shoulders when we talk about scientific farming. It is time for them to understand that scientific farming is only common-sense farming; that science is only common sense written out plainly and clearly; that it is based on laws as unchanging as the laws of the Medes and Persians.

Fewer acres, gentlemen; bigger crops and more profits.—Wallaces' Farmer.

◈

PAINTING SHINGLE ROOFS

With the present extraordinarily high prices for all classes of lumber, the subject of employing wooden shingles for roofing is a very vital one of dollars and cents to the property owner. If we are to use shingles, we should certainly take every precaution to make them durable and lasting.

The house in which I now live was built in 1873 by my father. It has a mansard roof, covered top and sides with wooden shingles and painted after the shingles were laid. For paint we have used natural graphite ground in oil, applying one coat, on an average, once in five years. This makes an exceedingly durable and satisfactory covering in every way, as the graphite wears well and looks fine, resembling natural slate in color. In fact, so closely does the roof resemble slate that we have had our neighbors remark, after passing daily by the house for years, that they certainly thought we had a slate roof, and were very much surprised that such was not the actual case.

This roof has been on fully thirty-four years. It has never been reshingled and is as sound and good to-day as it ever was. This certainly is an emphatic contradiction of the opinion held by many people that the painting of shingles after they have been laid does not increase their durability. To be sure, it is better to dip the shingles in paint before laying. In this way all parts of every shingle are covered and protected. But the roof in question has most assuredly lasted splendidly with only painting after laying.

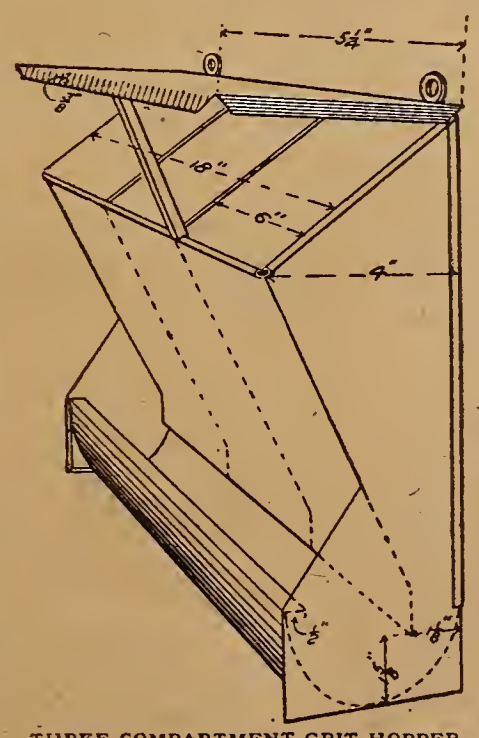
There is no better black paint than graphite for all severely exposed surfaces such as roofs. If a red color is preferred, use oxide of iron ground in oil. We have within a few years put a shingle roof on another building. In this case we dipped all the shingles completely before laying. This makes a perfect job, as, if the roof is occasionally painted, the shingles will last well-nigh forever.

Pay particular attention to the nails used in shingling. What is wanted is the old-fashioned iron cut nail. Neither steel nor wire nails are durable, as they rust in a few years and allow the shingles to blow off from the roof. Be very careful, in laying shingles, to have good, wide laps. Many supposedly good carpenters are careless in this way, failing to cover cracks and nails as they should. Too much pains cannot be taken in putting on a roof which is expected to be perfectly tight and dry for many years.—M. Sumner Perkins in Country Gentleman.

◈

POULTRY-GRIT HOPPER

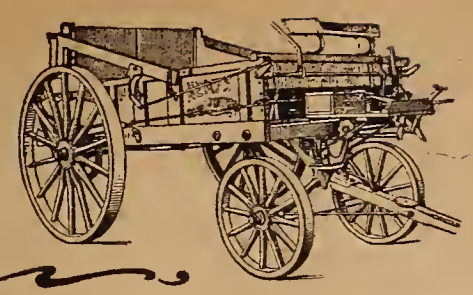
Recent experiments at New York Cornell Station have shown that lime and grit are required at all times by fowls for the best results as regards health and production. It is essential, therefore, that fowls should have access to cracked oyster shells or equivalent material at all times, and it seems also desirable that some other grit, and perhaps charcoal, should be provided. For this purpose a grit hopper



THREE-COMPARTMENT GRIT HOPPER

was devised by the authors, which is large enough to make frequent filling unnecessary and is so constructed that it will keep clean and will not clog or waste.

According to the authors, the cost of the hopper, which is made of galvanized iron, should not exceed one dollar. The illustration shows the appearance of the hopper and its method of construction. The rounded back and the overhanging lip in front prevent waste. The slanting top is also noticeable, as well as the eyes at the back, by which the hopper may be attached to the wall. The hopper illustrated is made in three compartments.—Farmers' Bulletin No. 316.



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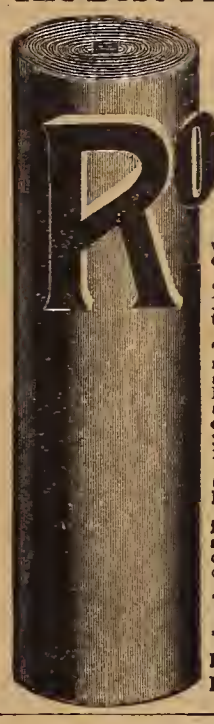

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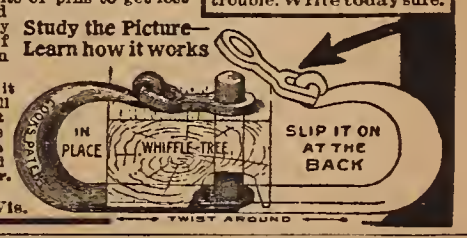

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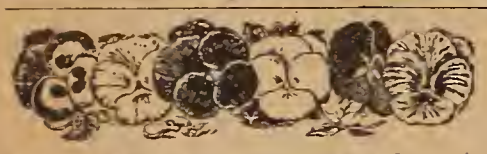

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Gardening

BY T. GREINER

SEED AND PLANT CATALOGUES

One letter after another comes to hand asking where seed of this or that variety of vegetables, or plants of this or that fruit variety may be obtained. Most seedsmen and nurserymen are so anxious to place their catalogues in people's hands, to let them know that they can furnish these things, that they spend a lot of money in advertising that fact, and will gladly send a copy of the catalogue to any one who wants it.

All you have to do, if you are not already on the list of customers, real or prospective, of any seedsman or nurseryman, is to spend one cent for a postal, and send in your name and address as a willing buyer. It is well worth your while to send for a number of these handsome seed and plant books, and look them over, compare prices, examine varieties, and generally refresh your memory as to the success you may have had with some of the things there described and recommended. And thus you will be able to hunt up the varieties that you want or that you find mentioned in the papers.

MAKING LIME-SULPHUR WASH

A reader wants me to tell him the "easiest way" to prepare the lime-sulphur mixture. There is no easiest way, nor even an easy way, unless we buy the concentrated solution ready made, such as is now found on the market. Undoubtedly this will soon be advertised quite generally in the agricultural papers.

To make it at home in a small way is a disagreeable job, and I would not advise you to undertake it. For larger operations you need a steam boiler, a series of barrels or tanks on a high platform, and everything arranged in a systematic way, so that the spray mixture may at once be drawn off into the tank of a power sprayer and used immediately. It is in best condition only while used fresh and preferably when still hot. For the home grower the "easiest way" is to buy either the commercial lime-sulphur solution, or a soluble oil, or clear petroleum.

SOIL FOR ONIONS

A Glenview, Illinois, reader writes that he wants to plant an acre of onions next spring. All the land he has is clay, and this gets very hard. He proposes to apply twenty-five loads of manure, and to cover this with one or two inches of sand, and plow this under, then mix it with the soil by thorough disk harrowing.

The soil we usually want for onions is a mellow loam. It may vary between sandy and clay loam, but in any event should have some proportion of sand, and enough organic or vegetable matter (humus) to make it mellow, so that it will not bake hard during the growing season. I have grown Prizetaker onions (transplanted) even in heavy soil that got so hard in the hot season that the onion bulbs could not easily push it aside, and had to grow square and cornered and ill shaped. But I do not advise any one to try to raise onions on such land. To plant an acre on clay land that will bake hard is a risky experiment, even with the treatment suggested.

A dressing of one to two inches of sand on an acre does not seem to be a great deal. But it means about two hundred cubic yards of sand, and therefore a good many loads. In many places sand can be had for the hauling, and perhaps near by. Here it would be worth a big fraction of what the onions would bring in market.

Apply all the manure—good old compost preferred—that you can get well mixed with your clay soil on a little patch, say an eighth of an acre or less; put on some sand if you wish and if you have it handy; then prepare this land as thoroughly as it can be done with earnest efforts, and plant your onions. If you raise good plants, so that you can set them in open ground in early spring, you will most likely succeed. But don't jeopardize your chances by attempting to plant an acre for a beginning.

ABOUT ONION GROWING

Much interest is manifested in onion growing by our readers. I have a number of inquiries on the subject. One reader wants me to tell him "in the next paper all about how to plant and cultivate onions," and another wants me to tell him all about the manure for the crop, and still another wants all the information about the seed, and where to get it, and what kind of onions he should plant, etc.

I think this is asking altogether too much. One number of the FARM AND FIRESIDE does not contain space enough in its reading columns to print all that might be said about onions and onion growing. But even at this writing (late in January) it is not too soon to attend to the matter of procuring the seed supply. This means, also, of course, the selection of variety.

Before we can buy seed we must know first what we want or what we need. For fall marketing I grow only the varieties of the large sweet Spanish type. Seed of these is already sowed in the greenhouse, and is partially up. With certain limitations, this class of onions is most profitable. I recommend them to every gardener for trial, but at first on a small scale only. Start the plants under glass at once, and transplant to open ground when the season opens.

For sowing seed directly in open ground, I would select Yellow Danvers or Yellow Globe as most promising. But I would not undertake to plant them by the acre as a first venture. Try a little patch, to see if your land is fitted for the crop and if you are fitted to grow it. Good seed can be had from any of the seedsmen who advertise in FARM AND FIRESIDE.

Local markets, or local conditions otherwise, may of course call for the selection of other varieties than those we use in our own ease. There may be a premium on white varieties in some places. In that case, the grower should try the white sorts like White Globe, or possibly Silverskin. The general market, however, prefers the yellow sorts.

In many southern sections the potato onion is grown from sets or bulbs, and in others the Bermuda, Red Creole and others from seed. The Spanish onions, I believe, will succeed anywhere that any onion grows, if the plants are transplanted from the seed bed, and seed is sown early enough.

The first thing that any one who desires to embark in onion growing for market even on a one-acre scale should do is to get all the information that is obtainable by reading modern books on this branch of gardening, and by inquiry and observation wherever it can be had, and last, but not least, by careful experimenting on a moderate scale. Any other course is unsafe and liable to lead to failure and disappointment.

SAWDUST IN MANURE

A Cortland, Ohio, reader, being short of straw, uses sawdust for bedding, but is told that this would "spoil" the manure.

I have been using shavings and sawdust for bedding for years, and am using such manure right along. I am only sorry that I do not have more of it. Of course, this, like other bedding materials in this vicinity, is expensive, and we use no more of it than we have to, to keep cattle and horses clean. The manure is good, and may be used when freshly made. For general garden purposes, however, it is better when composted, or allowed to heat and rot down to some extent.

When pine sawdust or shavings are used in too large proportion, and the resulting manure is applied too freely, especially on sod, I could easily imagine conditions under which it might have a harmful effect.

SPRAYING CURRANT BUSHES FOR SCALE

In any locality where the San Jose scale has once established itself, currant bushes are in great danger of being killed down to the ground by this pernicious insect unless the plantation is thoroughly sprayed year after year. The currant seems to be a favorite host plant for the scale, and often we may find the patch seriously injured in the spring, when in the fall previous the infestation had not even been noticed. Thus the insect often takes us by surprise.

The only safety lies in annual spraying, either with the lime-sulphur wash, or crude petroleum, or petroleum emulsion, or soluble oils such as scaleeide, etc. But spray we must, or we might as well abandon the patch. I use the knapsack sprayer for doing the work. Do it thoroughly. The currant is too good and usually too profitable a fruit to be neglected.

If you want to do something for us that we will appreciate more than anything else, send us two new subscriptions "FARM AND FIRESIDE Day," March 31st. In return we will extend your own subscription a year and send you the Roosevelt picture free.

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Fruit Growing

BY SAMUEL B. GREEN

MILDEW ON PLUM-TREE BARK

J. M. H., Edinburg, Virginia—The bark of your plum tree is covered with a superficial mildew of no special interest. I do not think it liable to hurt the trees, but would prefer to remove it, which I think may be done by spraying the tree with Bordeaux mixture, or even washing it with strong lye at this season of the year.

◈

ROSES BLIGHTING

G. R. G., Eaton, Colorado—It is more than likely that the roses which give you trouble by blighting before they open are not well adapted to your situation, and on this account it is probably unwise for you to bother with them. It would be far better for you to start with varieties better adapted to your section. This assumes that you are growing them in good soil, in full sunlight, and that they have plenty of moisture and are not overwet. If, however, the plants are shaded, this may be (to some extent, at least) the cause of the trouble. I do not think it worth while to try to doctor rose plants that have constitutional weakness.

◈

EUCALYPTUS IN NORTHERN INDIANA

O. S. E., Bremen, Indiana—The eucalyptus is altogether too tender for northern Indiana. There are a large number of species of this tree, but none of them are satisfactory where the thermometer is liable to fall much below freezing, and they thrive best in a dry climate on a moist, porous soil. Some of the species make a wonderfully rapid growth in parts of California, Arizona and Nevada, and it has been shown that they can be profitably planted for fuel in these sections.

The wood of the different species varies very much in quality. Some of it is fine grained, hard and durable, and makes good paving blocks. Other kinds produce wood that is open and porous in texture, and in drying shrinks and warps badly.

Probably the eucalyptus under favorable conditions is as fast a growing tree as is known. In one instance, recorded by the late Professor McClatchie, the Eucalyptus globulus grew to a diameter of eighteen inches in six years. This was located near an irrigation ditch in Arizona.

Some of the species are very ornamental, especially when in flower. There is an experiment station at Santa Monica, California, that at one time was used almost entirely for experiments in this very interesting class of trees.

The eucalyptus was introduced into this country from Australia, where it is native.

◈

DISEASED LEAVES

J. D. S., Menomonie, Wisconsin—The Martha crab is quite subject to leaf rust, and yours are evidently no exception to this rule, and at this season of the year they look especially bad.

The disease that causes the big blotches on apple leaves is frequently injurious at this time of year, when the foliage is weakened by the general ripening-up process. While it is undoubtedly an infectious disease, it is not sufficiently so to make it worth while for you to undertake spraying work in your small garden to prevent it.

There can be no question but that the spraying of your trees with Bordeaux mixture once a month during the summer would very much improve the appearance of the foliage, but I take it this would be altogether too much of a task for you to follow up, and it is not worth while for you to attempt it, and you had better select disease-resistant kinds. However, it might be desirable, when troubles of this kind are especially abundant, to spray the trees, even in small places, early in the spring with Bordeaux mixture or copper sulphate and water, one to twenty-five, in order to kill the germs of disease that may be on the twigs before the leaves appear.

◈

TIME TO PRUNE GRAPE VINES

A. J. McK., Kempton, Illinois—The proper time to prune grape vines in your section is in late autumn or on mild days during winter. If pruning is left until growth starts in the spring, then the sap will run freely from the wounds and be liable to cause a killing back of the wood.

In a short article like this it would be quite out of the question to give you definite instructions as to the best way of pruning grape vines, but in a general way I would say that you should bear in mind, when pruning grape vines, that the fruit is borne on the new growth that starts from the wood that grew last season. If the vines were not pruned at all they would set much more fruit than they could mature properly, and the result would be a lot of small, imperfect bunches of grapes.

If your vine is a neglected one, and has not been pruned for several years, then it will be necessary to remove more or less of the old wood, and it would be a good plan for you to get some one who has had some experience to help you in this matter. As a rule it is desirable to prune off about four fifths of the new growth, and the one fifth remaining will produce all the fruit that the vine should bear.

◈

A NEW WAY OF KEEPING APPLES

J. A. F., Sylvia, Tennessee, writes: "A short time ago I took dinner with a friend who had apples on her table, which were kept as follows: When ripe they were pared, and cut into quarters. A tight barrel was fitted with a slat support six inches from the bottom. These prepared apples were put in the barrel on this slat bottom, a close lid placed on top of the barrel, and a heavy cloth thrown over the barrel and tucked down close around the bottom.

"A little hand hole was made near the bottom of the barrel, under the slat bottom. A dish containing some sulphur was pushed in at this opening, then ignited, and the hole closed up, and allowed to remain a short time, after which the apples were taken out, packed closely in an open jar, and a cloth tied over it.

"In this way they had kept for over a year. They were perfect in solidity, color and flavor, and in fact seemed to be in a perfect state of preservation."

I have never before heard of such a way of keeping apples, but can readily understand how, if the fruit was treated as described, it would be perfectly sterilized and would keep the same as if it was boiled and then hermetically sealed in a sterilized jar. It is generally believed that fruit treated in this way contains so much sulphurous acid that it is difficult to digest, and our best pure-food laws place a ban on food so preserved. There is possibly some room for difference of opinions in regard to this matter.

◈

APHIS ON ROSE BUSHES

E. E., Washington, D. C.—I think the best remedy for the plant aphis (plant louse) that attacks roses is to spray the bushes with tobacco water, or where it is practical to do so, dip the ends of the branches in this material. Tobacco water for this purpose should be made by pouring boiling water over tobacco stems and making a decoction about the color of strong tea. You will also find that a strong soapsuds made from good white laundry soap is an efficient remedy for this pest.

◈

MIXING VARIETIES OF CURRANTS AND GOOSEBERRIES

J. M. L., Austin, Minnesota—I think that currants, gooseberries and raspberries, of the ordinary kinds anyway, will do as well when grown alone as when grown near other varieties, and yet it is quite possible that these fruits will set better when cross fertilized. I do not know of any experiments made to determine just this point.

◈

WHITE ASH FOR POSTS

C. H. G., Elysian, Minnesota—In my opinion, white ash posts, barked and cured, will last five or six years in a peat marsh. Ash wood is fairly durable in contact with the ground, and that which is grown slowly, so that it is nearly all heart wood, is more durable than that which contains a large amount of sap wood.

◈

GRAFTING CHERRIES

W. S. W., White Plains, New York—The best time to graft the cherry is early in the spring before the buds start. The form of grafting does not matter much on trees of large size, but on small trees I should prefer to use what is known as side grafting—that is, inserting the scions in the side of the stock and not cutting it off until this scion starts.

The scions are quite liable to injury if cut in the autumn and kept stored during the winter. On this account I generally prefer to cut the scions when the grafting is done, unless, of course, it is in some section where the cherry scions are liable to injury in winter, when it would be better to cut the scions in autumn. In storing scions I think they will generally winter best when packed in moist, not wet, forest leaves and kept in a cold cellar.

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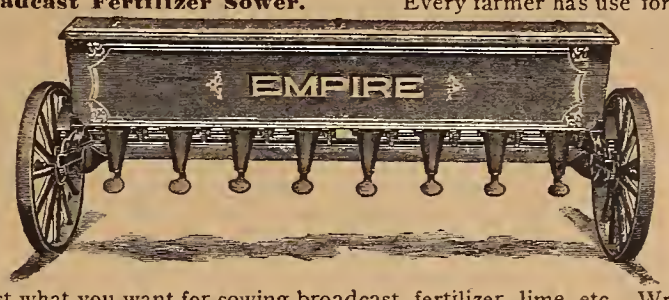

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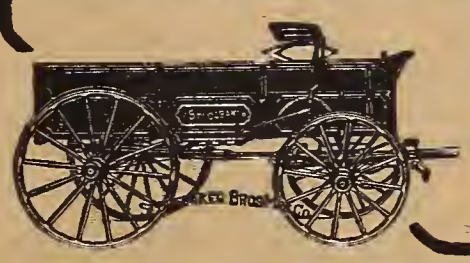

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Poultry Raising

IMPROVING THE FLOCK

If you already have some stock, and wish to improve it, get one or two good cockerels and mate with your best hens, and you will find that they will do your flock a world of good.

I wonder how many farmers think of keeping their cockerels separated from the hens when not using the eggs for hatching. I am afraid not very many. They let them run the year round together, and then wonder why the eggs are not fertile and the chicks that they do hatch out are poor, weak little things that linger for a week or two and then die off. It would be so easy for the farmer to fence off a good-sized plot of ground and keep his cockerels in it, seeing that they have plenty of good food and fresh water. It would take but a few minutes a day to attend to them, and the benefits derived would more than pay for the trouble. Remember the old saying that "what is worth doing at all is worth doing well."

Cull out all your old stock and fatten them for market. Give the growing chicks a chance, for remember it is the young stock that is the coming money maker. C. C. Ackerman.

HOW TO PREVENT MOISTURE IN THE HEN HOUSE

After being troubled two winters by extreme dampness in the hen house, the following plan was tried with perfect success.

The house was thirty feet long and ten feet wide, and was divided into three rooms of equal size, each having a ventilator in the roof. The boarding and paper was covered with shingles, which was supposed to make the building plenty warm enough, but such did not prove to be the case. As soon as the weather became quite cold, moisture gathered and came down in drops like rain. The hens looked, and were, unthrifty.

This is the plan: The middle room, being naturally the warmest, had another set of boards and paper put over the studding inside, both on walls and roof. The roosts were set back from the window under the slant roof, and were fixed with leather hinges and hooks, with which to hang them up when cleaning under them. This plan left about three feet from roosts to window, and the ventilator is directly over this part. In this warm room we shut our fowls at night when the weather is cold. The doors are opened during the day, and the west room is used as a scratching pen, the floor being covered deeply with straw, and a good dust box placed there. The east room we have for the nests and drinking dishes.

This house is dry and nice all the time now, and the reason, I suppose, is that the moisture instead of gathering on the cold walls finds an outlet through the ventilator with the foul air. There is considerable suction to this ventilator, which is made in the form of a chimney, with notches cut deeply on the four sides and a square board nailed over the top.

Mrs. Chas. Maranville.

HINTS ON HOUSING POULTRY

Select an elevation having a natural drainage away from the buildings. A dry, porous soil, such as sandy or gravelly loam, is preferable to a clay soil.

As sunlight and warmth are essential to the best success with poultry, the buildings should face the south. A southeastern exposure is preferable to a southwestern one if a direct southern exposure cannot be obtained.

The size of the house will depend almost entirely on the number of birds to be kept. If they are kept in flocks of about fifty, five or six feet of floor space should be allowed to each hen. The building should be high enough to avoid bumping one's head against the ceiling or roof.

My experience is that the best house for fifty or sixty fowls is ten by twenty-five feet, with front elevation about seven feet high and back about five feet. I prefer a roof made of shingles; however, roofing paper will answer, and some prefer it to shingles. Either is good. In the front, or the south, wall there should be placed two windows about one foot from the top and three feet from the ends; eight-by-ten-inch is a good-sized pane to use in a twelve-light sash. A door, three by six feet, may be made in one of the end walls, and also a small door in the front wall, for the use of the fowls.

The roost platform should be placed in the rear of the house, extending the whole length. The platform should be about three feet wide and three feet from the floor, and the perches be placed about eight or ten inches above the platform. The nests should be placed against the end of the house opposite the door, or under the roost platform, and should be darkened. Several small boxes for shells, grit, beef scraps, etc., should be placed against the walls about eighteen inches above the floor. R. B. Rushing.

DUCK FARMING

Early last spring I turned my attention to duck raising. Having a nice stream flowing close to my house, I decided to put it to use, so I enclosed it and two acres of land with a close wire fence.

I selected the Pekin as the best all-purpose ducks that I knew of. They are non-sitters and good layers, laying from one hundred and twenty-five to one hundred and forty eggs a season, commencing in January and laying on until July. The great advantage of the business is that you can make a start with a small outlay.

I started out with twelve ducks and three drakes, raising and putting on the market the same year one thousand fat ducklings, which brought from thirty-five to fifty cents each.

My method of raising was as follows: I enclosed the stream so as to make a dam and give the ducks a place to swim, as water is to ducks the same as a scratching place is to chickens. Twice a day I fed the older ones a ration of cracked corn and oats. The newly hatched were fed six times a day a ration of one part corn meal and one part bran, all mixed up with kitchen offal. At eleven or twelve weeks old the ducks are ready for market, and by industry and care a person can make money out of a pleasant and interesting summer's work. William Ewing.

SCRAPINGS AROUND THE YARD

The earlier you get your eggs hatched, and the warmer you keep the little chicks after they are hatched, the earlier you will get eggs next fall; and then is when you want eggs sure.

Every spring pullet should be laying by the middle of November or the first of December.

There are still some farmers who think "hens don't pay." But let's not be discouraged. There are fewer of these than there ever were before. Most farmers know it does pay to keep hens, if only they are well cared for.

It is all right to have plenty of litter on the floor of the feeding room, but it ought to be clean litter.

When you anoint the roosts with oil, don't forget to lift them out of their places and send a good big dose to the under side. It is right there the pests like to hide.

You may not think a hen knows anything; but how do you explain the fact that it is the man who is most kind to his hens that makes them pay best?

Streaks of sunshine make happy chicks. Let them out now, when the days are warm. But do by them as you do with your little folks in the house—keep their feet dry. Have your exercising pen dry and clean. Then the more sunshine, the better.

Shut your hens out of the place where the nest boxes are every night. They like to creep away into these snug places, but they are apt to leave them unclean in the morning. That doesn't pay.

I like to count chicks before they are hatched; but I want to be pretty sure they will hatch, after all. V.

CHANGE OF BREED

An old lady came to me, and said, "I want you to tell me what is the matter with my chickens. They grow nicely until nearly partridge size, and then dwindle away to skin and bone, and seem too weak to walk, and lie down and die, in spite of all they eat."

I said, "How long have you had these chickens without getting eggs or roosters somewhere else?"

"Ever since we were married," she said; "about forty years. They were a good breed, and we didn't want to change."

"Well," I said, "you go home and kill every chicken on the farm. Don't spare one. Then go and buy some real chickens—any kind you want—and every year, without fail, go and buy new roosters of pure breed to head your flock."

"I'll do it," she replied; and for years her new flock was the pride of her life.

Clifford E. Davis.

One good turn deserves another. If you will send us two new subscriptions for "Farm and Fireside Day," March 31st, we will send you the great $1,000 Roosevelt picture and will renew your own subscription a whole year without cost.

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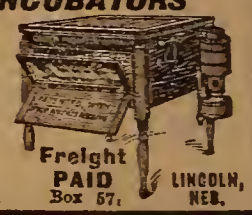

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It gives full instructions for operating all kinds of Incubators. This chapter is marvelously complete and worth dollars to anyone using an Incubator. It gives descriptions and prices of Incubators, Brooders and all kinds of Poultry Supplies. In fact, it is an encyclopedia of chickendom and will be mailed to anyone on receipt of only 15 cents. Your money returned if not pleased.

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A substantial practical incubator, 25 inches long, 21 inches wide, 14 inches high. Triple walls, hot water heat, aluminum coated tank, automatic regulator, nursery. With brooder $11.45. To points west of Rockies, incubator, $9.85; with brooder, $14.70. Order today. Money refunded if not as represented. 80-page catalogue free. Established 1867.

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Most liberal offer ever made. Wholesale price. $3 to $5 saved. Thousands of users recommend Gem Incubators and Brooders as the favorite. Book "Poultry Profit and Proof," tells why. Sent free. **THE GEM INCUBATOR CO. Box 56 Trotwood, Ohio.**

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Simple, perfect, self-regulating. Hatch every fertile egg. Lowest priced first-class hatchers made.

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BUCKEYE INCUBATOR CO. Box C 28 Springfield, Ohio

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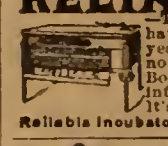

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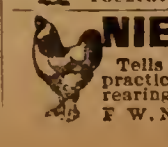
All Leading Varieties of Strictly Pure Bred CHICKENS, DUCKS, GEESE, TURKEYS, EGGS, and FREE TRIAL INCUBATORS at right prices. DON'T BUY till you see what we offer. A. 1. References. Send 2 cents for illustrated catalogue. **CHANTICLEER POULTRY FARM, Dept. 56, MANKATO, MINN.**



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Tells how to succeed with poultry. A practical guide on breeds, incubation rearing, supplies, etc. Copy for 4c

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Live Stock and Dairy

Producing Good Cream

In the production of cream that will meet the demands of a fancy city trade the care of the milk and the sanitation of the stable and barns are the most exacting phases of the business. Many people when handling milk seem to forget that they are dealing with a food product. If filth is allowed to get in the milk at any point of its production, no amount of care at other points can make amends for the difficulty.

The chief necessity in improving dairy conditions is to give the producer such a knowledge of the right methods of handling and caring for the milk that he will see the necessity for such methods, and will also know how to manage his work to accomplish the desired results.

In selecting a breed of cows for producing a good article of cream, the dairyman finds it part of his dairy economy to select individuals from the breeds that possess an inherited tendency to produce a large amount of butter fat at the lowest possible cost, and for this purpose the Jerseys and Guernseys stand at the head of the list.

The two cows whose photographs accompany this article are of a type that stands unexcelled as an economical producer of cream, and the product is being shipped from Erie County, New York, to the fancy trade of the cities of Washinging and Baltimore, which goes to show the extent of the market which is open to the man who makes the production of a really choice article of cream the leading branch of his dairy operations.

The next important factor after the selection of the breed best adapted to the production of cream is the sanitary condition of the surroundings. To produce clean and wholesome cream we must have clean and wholesome milk, and to do this it is essential that we have clean stables, clean dairy utensils, clean yards, clean and wholesome feed, and that the cows be milked by men who are clean.

To obtain the best results it is important that the cows be kept comfortable at all times. In order to have this it is necessary that we have a warm barn, with plenty of light. Pure air is just as essential to the production of untainted milk or cream as is the feed the cow consumes. A number of our leading authorities have said considerable about how much air space each cow should have, but I believe it more important that we provide means for a change of air than for any certain amount of air space.

To be sweet and clean it is almost necessary that a cow stable be whitewashed at least twice a year. This makes a cheap and effective disinfectant and can be easily applied with a spray pump. It should be well mixed and free from lumps before using, as the lumps are apt to clog the spray nozzle. Cement floors are the best adapted of any floor for a stable, and are easier to keep clean and free from foul odors than plank floors. With cement floors and the liberal use of absorbents it is not a difficult matter to keep the stables in a sanitary condition.

Many disagree as to whether the milk should be separated while warm and fresh from the cow or whether it is best to wait until it is cooled and aerated and again brought to the proper temperature before being separated and pasteurized. On most of the farms where fancy cream is produced considerable of the supply of milk comes from other farmers, and for this reason it is best that the work of separating be done by one man and at one place, thus ensuring a more uniform quality of cream.

The creamery building in the illustration is considered by many of our leading dairymen as being the model creamery of the United States, on account of its simplicity and the gravity scheme, which does away with all pumps and unnecessary machinery. The owner and operator, Mr. H. S. Gail, is one of our most skilful dairymen, and his success in shipping fancy cream to Washington, Baltimore and other distant cities has opened a new epoch in that branch of the dairy business.

When the cream is made from milk gathered from farmers it is necessary that it be cooled down quickly after the milking, and the cans set in a tank of cold water and allowed to remain in the water until ready to be sent to the skimming station. Bacteria that get into milk during the process of milking develop very rapidly as long as the milk remains warm, but as soon as cooled to fifty degrees or lower they develop very slowly, and if it is kept as low as forty

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Creamery located on hillside. The milk is put in on the up-hill side and allowed to flow down hill, as it passes from vat to heater, through separator and over aerator, cooled first by spring water, then by ice water, and the cream at last runs out into cans ready for shipping.

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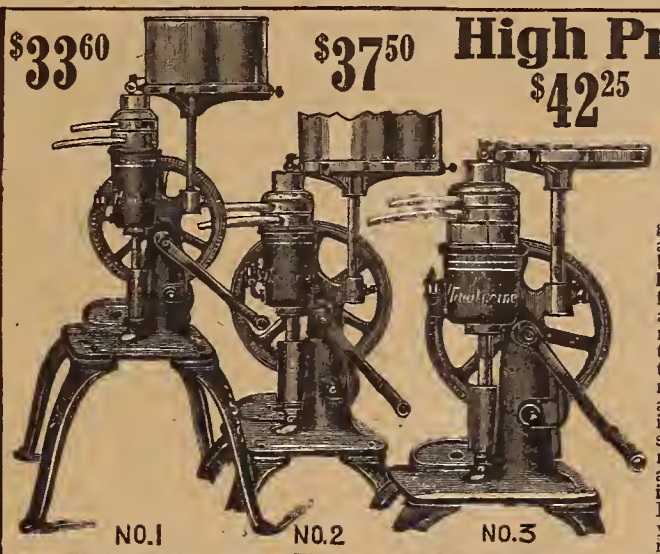

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Live Stock and Dairy

degrees their action is almost entirely stopped. It is very important to have a small milk house entirely away from the rest of the dairy buildings.

All dairy utensils should be washed as soon as possible after being used. The best method to clean cans consists in washing them first with warm water, in order to remove the milk, then with hot water and soap or some washing preparation. Cans should also be sterilized at least twice or three times a week, in order to kill all germs that may be secreted in the seams or rough places on the tin. Leave the cans open, so that the sun and air may get a chance to act on the germs. The bottles in which cream is delivered need to be sterilized and thoroughly washed to kill all disease germs. The whole secret of producing a fancy grade of cream is cleanliness from the time the cows are milked until the cream goes onto the tables of the consumers.

Avoid sudden changes in your line of feeding. A sudden change of feed often deranges the cow's digestive system to such an extent that her milk will have a peculiar, disagreeable odor and be the means of spoiling a large batch of cream. When turnips, cabbage or other vegetables are fed there is great danger of ruining the quality of the product, and when feeding ensilage it will be much safer to feed the cows their ensilage after the milk has been removed from the room where the feeding is done.

Every dairy room or cream-skimming room should have good drains, cement floors and plastered and whitewashed walls, and the floor should have slope enough to carry off all water to the drain tiles. Sanitary methods do not mean expensive methods, but that all of the buildings, tools, utensils and men employed must be neat and tidy and kept free from bacteria. Some of the best and most sanitary creamery rooms are the least expensively equipped.

The next step is marketing the product, and here the main point is to put up an acceptable article, one that the consumer knows is made in a sanitary manner, and that the quality can always be depended upon, and there will be no difficulty in securing a ready market at an advanced price. There is not a city of thirty thousand inhabitants in the country but that would be a good field for a man to start a business of selling fancy cream to the best consumers at an advanced price over what the common dealers are now selling it for. If you are selling twenty-per-cent cream, keep your cream at that test, and if your trade demands a cream that will test forty per cent, do not try to work off cream of a lower test when you are a little short. Always sell what you advertise, and ask a price that will leave you sufficient profits to maintain the high quality of your cream.

W. Milton Kelly.

GRADES AND CROSS BREEDS IN HOGS

We often read of hog raisers who, while they recognize the value of pure-bred sires, seem to think that a hog must have some native or scrub blood in it to give strength of constitution and energy.

The scrub-hog raiser pays but little attention to the breeding of his hogs. He is too close fisted to spend money for new blood, and as a rule, when a sow gets her growth, she is fattened and slaughtered, and young sows, and often a boar of the same litter, are kept for breeding purposes. In the scrub-hog business there is no standard of excellence. The breeder has no ideal. Just so he gets hogs is all he cares for. His motto is "a hog is a hog," and as a result we have inbreeding without the careful selection, which is certainly worse than the inbreeding of good stock by experienced breeders.

But do the breeders of pure-bred stock practise the inbreeding to the alarming extent that some attribute to them? I think not, and I feel sure that a careful study of herd books will show that most reputable breeders spend large sums of money to get new blood in their herds.

Then is it not more likely that where grade pigs grow faster than full bloods that the milking quality of the grade dam is more responsible for this than the lack of vitality of the pure bloods? The pure blood is prepotent over the scrub and gives the pigs their good qualities. Some of the full-blood breeds are of excellent milking qualities and nourish their young well, but good milking qualities and excellent meat-producing qualities are not, as a rule, combined in the same animal. Breeders of some of the pure-bred hogs seem to have overlooked the milking qualities of the dam, and have bred for meat production alone.

A. J. Legg.

FEEDING THE BROOD SOW

During the first twenty-four hours after farrowing, while the sow is yet in a feverish condition, she will show little, if any, inclination for feed. And while she is in this condition, a good supply of water, slightly warmed, should be given. As the sow has not yet regained her appetite for heavy feed, she will relish a thin mash made of bran and skim milk. On the second day a slop of wheat shorts and bran will be found an excellent feed, but if these are not available, four pounds of corn mixed with one pound of oil meal will do well.

A mixture of two pounds of corn with one pound of shorts or bran should be fed in increasing amounts until the sow is taking a full feed. A day's ration would then be about four and one half per cent of the live weight of the growing sow, and four per cent of the weight of a mature sow in average condition. Such a heavy ration should consist of six pounds of corn to one pound of oil meal or gluten meal. I have found that these foods are often cheaper than shorts or bran. With a sufficient quantity of skim milk, four or five pounds to one of corn may be fed, in which case nothing else is needed. Mangels or other roots are an excellent feed for brood sows; however, alfalfa is the most economical of all and can be fed as soon as the sow has fully recovered from the effects of farrowing. Not less than sixty per cent of the sow's full ration should consist of corn, with the remaining forty per cent hay; and should the hay be short and fine or in the form of chaff, half corn would keep her in a good, thrifty condition.

I give my sows all the good clover hay I can get them to eat. They will consume a great deal more of it than many farmers would think. In feeding my young sows uncut hay I give them about three per cent of their live weight of corn and let them have all the hay they wish. I never, under any circumstances, feed sour milk to my sows with a young litter of pigs, because it is likely to cause scouring and ruin the prospects of the litter.

When a sow is suckling a good-sized litter of pigs, no matter how liberally she is fed, she is almost certain to shrink in weight. But this, however, may be recovered after the pigs have been weaned.

I turn my dry sows, from which the pigs have just been weaned, into a pasture by themselves, and give them very little grain. Those that show themselves to be prolific and good mothers I retain as breeders; those being unsatisfactory in any way I fatten and sell as soon as possible.

It does not pay to keep a sow over a year that cannot raise a large litter of pigs, unless she is pure bred and a very exceptional individual. If I want a second litter during the year I put the sows to the boars during the first heat after weaning. I do not like to pass many periods of heat, for fear that the sows may become shy, and there is no reason why they should not have two litters a year.

Wm. H. Underwood.

DAIRY JOTTINGS

Whitewash being one of the best-known disinfectants, the cow stable should be whitewashed once a year at least.

When the grass is far enough advanced so that the dairy cow can secure sufficient succulent food, it will still be well to give her a small grain ration twice a day. It will come back by the milk-pail route.

The dairyman who has his stable located on an elevation has cause for being thankful, as good drainage is easily secured. Those who have not good drainage should immediately provide some method for keeping their stables dry.

Milk the cow dry. This develops the udder as well as increases the power of giving milk. If there is even a very little milk left in the udder after each milking, it will cause a decrease in the flow of milk, and finally cause the cow to dry up before she would otherwise.

Milk utensils should invariably be made of metal, with joints smoothly soldered, so as to avoid seams, where filth may accumulate. In cleaning dairy utensils, always rinse thoroughly in tepid water. Lastly, sterilize with boiling water or steam. After cleaning, give them, if possible, a good sun bath, which is conceded to be a most effective microbe destroyer.

Gilbert Allen.

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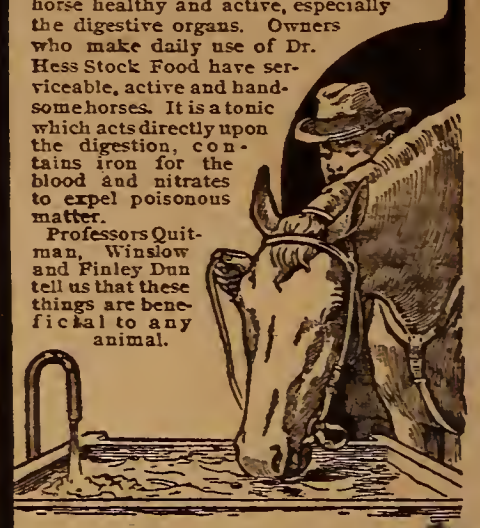

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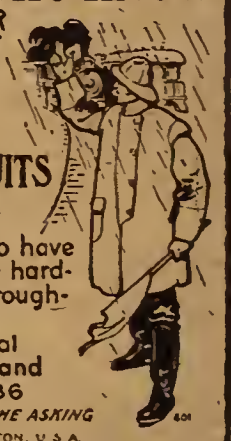

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Live Stock and Dairy

CALVES IN SPRING

The spring season is generally an anxious period to owners and breeders of cattle, owing to the many diseases to which young stock are liable at this time of the year. Possibly no two complaints give more worry and anxiety to those connected with the bringing up of young stock than white scour among calves, and blackleg, or quarter evil, among yearlings, both diseases causing a great amount of trouble and pecuniary loss, to say nothing of disappointment, which by a little extra care and precaution could be to a great extent averted.

WHITE SCOUR

Once white scour makes its appearance it is apt, unless every precaution is taken, to quickly go through all the youngsters that are in contact with the smitten one, and it is very difficult to get rid of, so that the great thing is, if possible, to prevent its making a start.

It is said by some theorists to arise from a certain microbe being taken into the body of the calf by means of the navel, but no doubt the chief cause of white scour is indigestion, created either by unwholesome milk, arising from improper feeding of the dam, or by the calf being allowed to have too much milk at feeding time, and having the meals at too great a length of time between them. Unsanitary calf pens are likewise a frequent cause, and great care should be taken that all calf pens have not only a good supply of fresh air, without draft, but also well-constructed floors, so that all liquid can get away and the calf be always on a dry bed.

Care should be taken that no artificial foods be given to the dam that are likely to cause the milk to become too rich and heavy for the young calf, and for this reason cotton cake should never be used, or only very sparingly. Roots, too, given in excess, and coupled with the very young grass and warmer weather at this time of the year, are also a frequent cause, and if used at all, should be given only in small quantities, and with plenty of good hay.

Calves that run with their dams on grass in their natural state are seldom affected with scour, and that shows that the food of the dam and the withholding of free access to her have a good deal to do with it.

Among calves that are being hand reared with separated or skimmed milk it sometimes arises from the milk being from cows that are old milched, or by being fed to them at an improper temperature, and by want of cleanliness in the feeding vessels.

When white scour makes its appearance it will be found advisable to take the affected calf off milk at once, and after giving it one or two doses of castor oil or salts mixed with a little warm, sweetened gruel, for thoroughly clearing the stomach, follow on with a mixture of beaten-up eggs and port wine, made by beating up two eggs thoroughly, shells and all, and mixing them with a glass of port wine, and giving it to the calf about three times a day. This will be found to sustain the calf and counteract the acidity in the stomach, and will generally effect a cure in two or three days. The calf should not be allowed to have any milk until all the symptoms of scour have disappeared.

A little cold flour gruel, in addition to the eggs and port, may be given if thought necessary, and then the greatest care should be taken that it does not have too much milk at a time when again allowed to suck.

Care should be taken that all places where affected calves have been be well disinfected.

BLACKLEG

Blackleg, or quarter evil, chiefly affects young cattle from nine to eighteen months old. It arises from the entrance into the system of a microbe, the development of which is governed to some extent by the conditions under which the animal lives, and which, if its development be not quickly checked, creates an impurity of the blood, ending in stagnation and death.

It is a mistake to think that this disease is caused simply by a change from bad to good living, or vice versa. Without the presence of this micro-organism the disease will not occur, and no doubt the microbe is taken up into the system from the land either by means of some obnoxious herb or from the throwing up of earthworms on pastures where animals that have died from the disease have been carelessly buried.

As with white scour, so with blackleg, prevention is better than cure; in fact, if an animal is once stricken with blackleg, a cure has very rarely, if ever, been effected. The principal thing to do is to get the blood into a thoroughly pure state, thus putting an end to any microbes that may be lurking in it. When this is accomplished it will be found to make no difference whether the animal is in too high or too low condition.

As a preventive of blackleg and a thorough purifier of the blood, chlorate of potash has been proved by practical experience to be one of the best, and should be given in doses of from three drams to four drams, according to the age of the animal, mixed in the food twice a week, for four or five weeks in the months of February and October. The chlorate of potash should be well pounded, and all the small lumps well broken up, so as to mix well with the food, and can be given in damp chaff and grain or pulped roots, and will be found a cheap and effectual medicine.

The greatest care should be taken that no animals which have died from this disease are buried in any field where young stock are turned. Let them be buried in a plowed field in quicklime as deeply as possible, but it is far better to burn them.

W. R. GILBERT.

ANOTHER BLEAK HOUSE JERSEY

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R. B. RUSHING.

U S U S

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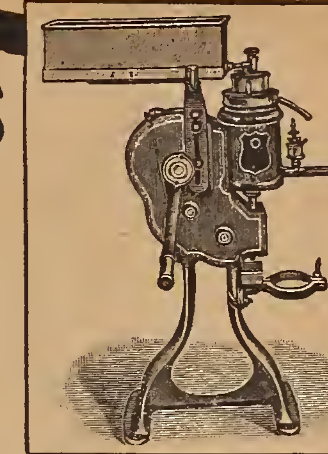

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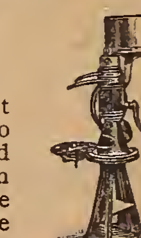

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Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, do not fail to say it is a **renewal.** If all our subscribers will do this a great deal of trouble will be avoided.

FARM AND FIRESIDE

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ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

Have your seed and implements all ready, but don't begin working the ground until it is in condition. When you work the soil before it is dry enough you only add to your troubles.

◈

Whenever you add farm manure to your soil you also add bacteria, which are helpful in increasing the supply of available plant food. These ferments also tend to produce an alkaline condition of the soil, and so favor the nitrogen-gathering bacteria.

◈

It will be well to keep a list of the seeds you use in the garden this spring, and if you find that a variety is especially adapted to your conditions or is of especially fine quality, make a note of it on your list, and use the same variety next year.

◈

The wise farmer remembers that he forgets, and therefore keeps a simple but accurate record of his business transactions. Many also keep records of the work done on each crop, and by studying these from year to year become more efficient managers.

◈

Were your potatoes affected by scab last year? If so, you should attempt to prevent it this year by disinfecting your seed by soaking it for two hours in a solution of one pint of formalin in thirty gallons of water. Do not plant in soil that is known to be infected.

◈

The farm owner that works his own land puts his surplus into improvements, and increases the value of his land. The farm owner that rents his land spends the income elsewhere, and the value of his land declines. May the percentage of farm owners working their own land increase.

◈

Success on the farm is more frequently the result of good management than of good soil. The good manager will succeed on poor soil, but the poor manager will fail on good soil. Give some of your time to intelligently planning your work, so that it can be done to the greatest possible advantage.

◈

The important thing in keeping down the weeds is to have your work so well in hand that you can stir the soil when the weeds begin to start. Delay at this time increases the labor of fighting them, and if deferred too long, means labor lost. Do not plan to put out more crops than you can well care for.

◈

If you have your seed corn tested and graded, there remains one more test to be made before you are ready to plant. You ought to know whether your planter will drop the desired number of kernels each time. Take your planter onto a clean floor and operate it by hand until you find that you have it so well adjusted that it will drop the required number of kernels at least ninety-five times out of one hundred. Good seed will not make a good crop unless properly planted.

◈

FORESTS OR FLOODS?

Plant trees; plant trees. Plant them on the hillsides, where the rains now wash the soil down to the valleys. Faster and faster, year by year, do the storm waters rush down these soil-washed slopes, and more and more frequent are destructive floods along the streams and rivers.

At the present rate of timber consumption, which is three times its annual increase in growth in all the forests of the country, it will be only a comparatively short time until the hilly regions will be absolutely deforested and denuded of their soils. Then, unless we wake up now to the importance and necessity of the great work of reforestation, Macaulay's New-Zealander can visit the United States and find whole regions larger than his native land barren and uninhabitable.

The federal and many state governments are doing great work in forestry, but it is, after all, so little compared with what ought to be done. Many millions of dollars' worth of property is now annually destroyed by sudden, high floods due to deforestation of the hills and mountains. If half the amount could be expended annually on practical forestry, it would make a good showing. But landowners should not wait for the government to do everything. Every one can do his share alone. In every rolling country there is hardly a farm that does not now need some tree planting to prevent soil washing and injury from rushing storm waters. Plant trees; plant some this spring.

◈

GAMBLING IN COMMODITIES

Before the Ohio legislature is a bill called Shuler's bucket-shop bill, the object of which is to suppress gambling in commodities. At a recent open meeting of the House committee having the bill in charge there appeared a number of so-called grain dealers in opposition to it, claiming that it would hurt legitimate business.

One of the speakers said that the brokers and the speculative business they did were a benefit to the farmers and a benefit to men who have money to invest. He said that the farmers last year received $360,000,000 more for their grain than they otherwise would have received, because the brokers established standard prices. Let us assume that this statement is true and the figures correct. Mind, we do not say they are true, or ask you to believe them true, but let us just assume that the farmers last year did actually receive $360,000,000 more for their grain than they otherwise would have received, because the brokers "supported the market." What, then, is the logical conclusion of this line of reasoning? It is this: On account of these same philanthropic speculators, the consumers had to pay over $360,000,000 more than they otherwise would have paid. Where, then, is there any justification for their business?

* * *

In appealing for aid to the cupidity of the producers these grain gamblers seem to forget the existence of the consumers. We say seem, because they really have not forgotten. In this case their argument is addressed to members of the legislature from the rural districts, and they are trying to throw dust in the eyes of the farmer. In appealing to representatives of grain consumers the statement would be reversed, and some other broker, or so-called grain dealer, would appear before the committee and say that consumers last year saved $360,000,000, because the brokers kept prices down. The statement is simply adapted to the occasion, whatever it may be.

* * *

The argument itself of the grain gamblers is conclusive evidence of the infamy of their methods. What right did they have to increase the cost of grain to consumers last year by more than $360,000,000? They now ask the producer's aid against anti-gambling legislation on the highwayman ground that they have benefited him by robbing the consumer.

As a matter of fact, farmers are not asking for the services of speculators to raise the prices of their products above the normal level. On the other hand, consumers are not asking them to beat down the prices of farm products. Both producers and consumers are willing for the enactment and strict enforcement of effective laws against gambling in farm products. Both know that these gamblers are parasites on the business of the country. It is safe to say that about ninety-five per cent of stock-exchange transactions are nothing but bets that the price goes up or down.

Grain gamblers care absolutely nothing for either producers or consumers. They are after juicy chops, and it makes no difference to them whether the lambs are wheat growers or bread buyers.

PROTECT DEPOSITORS AND KEEP RESERVES AT HOME THE TRUE REMEDY FOR PANICS

In Congress there is a wealth of discussion over the Aldrich bill to provide for an emergency currency. Because some of its provisions are manifestly to the special advantage of a few big banks that form part of the machinery of stock gambling through their close affiliation with the New York Stock Exchange—the greatest gambling institution on earth—it has no chance of passing Congress in its original form. Among the more important amendments offered is one to eliminate railroad bonds, which would furnish a broad and vicious basis for a "stock-exchange currency;" one to add a provision repealing the present faulty law relating to bank reserves, and another to add a section providing protection for all bank depositors.

* * *

Following are some remarks on the latter two amendments by Senator Knute Nelson of Minnesota:

"I have derived two lessons from the recent panic. One is, first of all, and I shall offer an amendment to that effect, to repeal the law relating to our vicious system of bank reserves. Allow the banks to deposit their money wherever they will, but not allow such deposits to be credited upon the required reserve fund which they are to hold for the protection of their depositors. The recent panic demonstrated beyond any peradventure and beyond any doubt—there can be no question about it—that the greatest evil that befell the banks in the interior of the country, the country banks, was the fact that their reserves were tied up and were not available.

"In the state of Minnesota, prior to the suspension and tie-up in New York, we had been moving all our crops with Western money; and we had a splendid crop, too, and prices were high. Our country banks were well supplied with currency, and they were devoting that currency to the movement of our crops and to commercial purposes, for be it known that our country banks in the West do not have any of these call loans on stock collaterals. It was not until the panic started in New York and until the banks of New York and Chicago tied up over $30,000,000 of the funds of our national banks in Minnesota that our banks in the Twin Cities were forced to follow suit.

* * *

"The panic started as a panic of depositors on the nineteenth of October, but it proved in the end to be a panic of the banks. The banks in the reserve cities were more panic stricken than even the depositors. During the entire period of the panic they were hoarding all the money they could lay their hands on.

"I think it must be patent to every senator who has kept track of the recent panic, how unfortunately that system of bank reserves worked; how the tie-up in New York led to the tie-up in the large banks of the reserve cities throughout the country; how it hampered the commerce and the trade of the country, and how it affected especially the farmers of the South in handling their cotton and the farmers of the Northwest in moving their grain crops. There was as much currency in the big banks in October, 1907, as in October, 1906. The difference was that in 1907 the big banks had it tied up. In other words, we suffered from a bankers' panic.

* * *

"To my mind, in repealing the law relating to reserves, to which I have called attention, I think we ought to do something to protect our depositors. To my mind, as a matter of principle, there is no distinction between a bill holder and a depositor—both are creditors of the bank. A bill holder is a creditor of the bank. We secure that liability, we protect that creditor of the bank, but the other creditors, who outnumber the note holders many times, we leave in the lurch wholly unprotected.

"I am always in favor of using moral suasion instead of drastic legislation. If we enact a provision in our national-bank laws protecting depositors, it will operate as a moral suasion on the different state legislatures, and the state banks and the trust companies will go to their respective state legislatures, and say, 'For God's sake save us against these national banks; they are getting all our deposits; they protect their depositors, and we have no chance; you have got to give us a similar law.' That is the way it will work, and that is the way it will be.

"The note that the bank issues and the pass book or the certificate of deposit are both debts of the bank. Why should we segregate and protect one class, the less numerous class, and leave the other, the more numerous class, in the lurch, especially when, in order to maintain our currency in circulation, it is necessary to encourage the people to keep their money on deposit in the banks, to the end that the latter may employ the same in commerce and trade; in other words, devote the same to commercial loans?"

The Roosevelt Picture

On page 22 of this issue is a small and very crude reproduction of the now famous photograph of President Roosevelt five hundred strong, or, as one of our friends said, "Half a regiment of Roosevelts."

This Roosevelt picture ought to make it mighty easy for you to help us celebrate "FARM AND FIRESIDE Day," March 31st.

It is hard for us to remember sometimes that FARM AND FIRESIDE is a stranger to many persons, and its merits unknown to them. With such people this wonderful photo will offer a strong inducement to subscribe. After they once know FARM AND FIRESIDE it will be comparatively easy for us to secure their renewals year by year—anyway, that is our job.

* * *

As we have said several times, your interests and our interests require as large a number of subscribers as possible, so that the subscription price may be kept down to the lowest possible figure.

To make "FARM AND FIRESIDE Day" a success, all you need to do is to send us two new subscriptions at twenty-five cents each. To reward you for your effort and to show our appreciation, we will extend your own subscription a whole year from the time when it expires, or we will send FARM AND FIRESIDE without cost for a whole year to any name you give us.

In addition we will send to you or to any one you may name, one of the famous Roosevelt pictures.

* * *

TO SUM IT UP

To us { Two new subscriptions, at twenty-five cents each, on or before March 31st.

To you or to any friend { A year's subscription free and the wonderful Roosevelt picture 13½ by 20½ inches.

Salome Burke's String Of Pearls

BY J. L. HARBOUR

There was genuine surprise among his heirs and throughout the town in which he had lived all of his life when the will of Addison Burke was read the day after his funeral. It was known that he was "well fixed," but not even his own children had any idea of the number of stocks and bonds and "gilt-edged" securities he had tucked away in a cheap little safe he had kept in his bedroom in the old Burke homestead, an unpretentious little house not nearly so large nor so ornate as the homes of old Addison's neighbors, whom he could have "bought and sold over and over again," as some of the people of West Melton said.

Mrs. Ezra Hopper and Mrs. Silas Jay discussed the matter over a cup of tea in the home of Mrs. Hopper after it became known that the estate of Addison Burke would exceed seven hundred thousand dollars, and that it was to be divided equally between old Ezra's spinster daughter Salome and her married brother Elbert, who was already quite a prosperous man.

"There's one thing I feel sure of," said Mrs. Silas Jay, a large, placid woman with twinkling blue eyes and a perpetual smile. "That is, that Salome Burke won't splurge much more with all that money her father has left her than she has in the past on the five dollars a week I have heard her father used to allow her. She ain't the splurging kind. Too much like her father for that. But Elbert! He's a different proposition. 'Spesh'ly when you include his wife."

"I should say!" said Mrs. Hopper. "I reckon Elbert and Jennie Burke will do splurging enough for themselves and Salome, too. If they don't try to butt in to fash'nable society now, I miss my guess. I ain't any idee they'll stay here in West Melton long. They will be likely to move over to the Center now. Jennie has been trying to work her way into the upper ten there for some time, and of course she can do it easy now, for there ain't many people in the Center worth as much as Elbert is now."

"But you'll see that Salome don't do any moving over to Melton Center. I've heard her express her opinion of fash'nable society, and she ain't no use for it. Another thing: I guess you'll find that Salome will do a lot of good in a quiet way with her money. I don't know if it is true or not, and yet I have it pretty straight that Elbert's wife is some disgruntled because the will divided the property even. She thinks that Elbert, being a married man with a wife and four children, should have had more than Salome, and I reckon like enough Elbert thinks so, too. I did hear that Elbert had even tried to get Salome to let him have more than half when it come to signing certain papers."

"She didn't do it?"

"Well, I guess not. You know that Salome thought the world and all of her father, and she felt that anything not in strict harmony with his will would be displeasing to him, and she held out for ev'ry cent due her on his account. If he had willed away ev'ry dollar to some school or charity, I warrant you Salome never would have tried to contest the will. She's as honest a soul as ever lived, but she wants her own and she wants ev'ry one else to have their own. Her father was like that. Say what they will about old Addison Burke being close, no one can say that he wasn't perfectly honest, and his word was just the same as his bond. Years and years ago, when he was a comparatively poor man, he went security on a note for a man my husband knew, and the man run away and let the note go to protest, as they say. There was some sort of a hook or oversight in the note that would of let Addison out of paying it as security, but he walked right over to the bank and paid it. Another time years ago a man named Jasper, who used to loan money here, loaned Addison a thousand dollars, and Jasper died suddenly of heart disease, and a day or two later his house and all his papers were burned. Not a human being but this man Jasper and Addison knew that he had loaned Addison that money, but Addison Burke walked around to see the widow the day after the fire, and told her he owed her husband a thousand dollars that he would pay the day the note fell due. It was mighty certain that others in this town who had their notes that Jasper held burned up never peeked about it. Salome is like her father in being so dead honest."

"I guess Elbert is honest enough, but he wants to fly high, and he's got a wife that is even worse than he is in that respect, and I guess you'll see them spreading it on pretty thick now, with all that money."

Mrs. Hopper's prediction that Elbert Burke would move to "the Center" proved true. Melton Center was a large town four miles from the village of West Melton, in which Elbert Burke had been born, and in which he had lived all of his life. His father had been president of the savings bank in the town, and on the death of Addison Burke Elbert had succeeded to the presidency of the bank. West Melton was a manufacturing town, and many of the foreign mill operatives were very thrifty. They received their pay every Saturday at noon, and the greater part of the money was apt to go into the bank on their way home to dinner.

Elbert Burke retained his business interests in West Melton when he removed to "the Center." Indeed, a great part of his inheritance was invested in the mills and other property in West Melton, and it was to his advantage to retain all of his business interests in the town. But he built by far the finest house in Melton Center, and Mrs. Burke had little difficulty in establishing herself as the leader of society in the town. Very soon Elbert had exchanged the horse and buggy, with which he rode between the two towns, for a big red automobile, and Mrs. Burke's infrequent visits to her old home were made in a splendid "touring car" driven by her own chauffeur. The entire family went abroad the summer after Addison Burke's death, and on their return the eldest daughter, Esther, was "introduced to society" at a "function" that quite surpassed anything ever known in Melton Center. A seashore summer home was added to their social equipment, and Mrs. Burke was not unwilling to let it be known that her pearl necklace cost six thousand dollars.

"Just think of that!" said Mrs. Ezra Hopper when she and Susan Jay met at one of their frequent tea drinkings.

"What would old Addison Burke think of it?" asked Susan.

"Sure enough! And I wonder what Salome thinks of it."

"No one knows, for Salome keeps mum as the grave. She's one of the kind that is loyal as death to her own fam'ly. You'd never hear her saying a word, no matter what Elbert and Jennie do, and I don't think it would be healthy for any one to say anything ag'in them to her. Serilda Bent tried it at the last meeting of the Dorcas Society, and she got one good call-down."

"She did? I ain't heard."

"Well, Serilda blurted out something slurring about Jennie putting on so much style, and all that, and sort of appealed to Salome as if she expected her to side in with her, but instead of that Salome stiffened and said cold as ice, 'Will you please remember that you are speaking of my brother's wife, Serilda?'"

"You don't say! Good for Salome! All the same, I guess she has her own opinion of it all. Ain't it just as I said it would be with Salome? Excepting for her getting that new phaeton and having the house all painted over and a new bay window in the sitting room, I don't see that she has spent any of her inheritance."

"I have heard that she has given a thousand dollars to an orphan asylum down South that a cousin of hers is at the head of, and she gave five hundred to foreign missions last month. Excepting for her plain mourning for her father she ain't even come out in any new clothes. But I guess some of us can guess how that promising son of the Widow Hart's happens to be posting off to go through college, and it wouldn't be very hard to guess how the Clays are able to send their Esther off to the city to fit herself for teaching music."

"No; and we all know who paid for the trained nurse that came over from the Center and took such nice care of poor old Thyrza Felton in her last sickness, and we wouldn't have to guess twice in regard to who paid old Ellen Taft's way into that fine old ladies' home over in the Center. Then when the Widow Riley got burned out last winter, it wasn't the town that put her into that cozy little house over by the river and outfitted the widow and her children with nice warm clothing, and put a barrel of flour into the house and three tons of coal into the coal house. I just tell you, Susan Jay, that Salome Burke is making a string of pearls for herself a good deal finer than Jennie's six-thousand-dollar string."

"Yes, and I reckon that she will have a good many more stars in her crown than Jennie in the next world," said Mrs. Jay. "And yet Jennie don't invite Salome to any of her big swell 'functions.' I guess it's mighty little Salome cares. And I reckon that Elbert and Jennie feel that the more Salome saves, the more there will be for their children to spend. I wouldn't want it said as coming from me, but they do say that Elbert's folks are flying higher than even folks with their income can afford to fly, and that Elbert is aging fast. He's three years younger than Salome, and he looks five years older. I guess his boys ain't turning out very well, having all the money they want to spend."

"Nothing could be worse than for them to have too much money without earning any of it. My husband got it from Lawyer Hyde that Elbert was converting some of his bonds into cash and going into the stock market. I don't know about such things, but my husband says it's risky business."

"They say that Jennie wants her oldest girl, Louise, to marry a duke or a count, and you know that it takes a lot of money to buy one of them things, and they ain't 'wuth it,' as the old lady says, after you've bought them. I met Jennie on the street when I was over in the Center one day last week. She looked dreadfully made up. She'd just come home from Europe, and as there wasn't any of her fash'nable friends around to see her talking to a plain, unfash'nable body like me, she stopped and was real friendly. I just wonder if there ain't times when she rather wishes that she was back here in West Melton living in the little house in which she and Elbert begun their housekeeping. I read a piece in the paper the other day that said 'the best elements of human happiness are the simplest and most frugal,' and I guess it's about so."

"I reckon it is. If Elbert Burke is any happier now than he was when he lived in that little house, he doesn't look it, that's what he doesn't."

There was wild tumult in the little village of West Melton one day four years after the death of Addison Burke. From the humble homes, from stores and from the noisy factories the people came. Men and women left their looms and spindles and work benches in the mills and workshops and hurried into the streets heedless of the rules that forbade employees to leave their work until the noon hour. A great crowd gathered in front of the West Melton Savings Bank to discover for themselves if the swift-running and ominous rumor about the failure of the bank could be confirmed. Many of the men swore and the women wept when they saw the bank doors closed at eleven in the morning, and a placard bearing in large letters the information that the bank had been closed by order of the bank examiners. Something was wrong. A great deal was wrong. The depositors had lost their money through the defalcations of the president of the bank, Elbert Burke. The furious mob cried out for vengeance. The people demanded to know where "the thief," "the scoundrel," "the villain" was. Old women became hysterical when they knew that their small savings were gone, and children wept and wailed with their widowed mothers. Suddenly a little woman wearing a plain black dress and hat appeared on a small balcony above the doors of the bank. She was Salome Burke. She held up her hand for silence. So she stood until all the people were still, and then Salome Burke, who never "took part" in prayer meeting or spoke in any other public assemblage because of her timidity, spoke in a voice that was heard far up and down the crowd below her.

"Listen to me!" she said. "I want all of you people to go back to your homes or back to your work. This bank will open to-morrow morning just as it has opened every morning when it should have been open every day since my good father established it. I have money enough to pay in full every depositor in this bank, but the money is not here now. It will be here to-morrow morning at nine o'clock, and you can come and get your money then, or it will be perfectly safe if it is left in the bank. I have lived all of my life here among you, and you know whether it is or is not true of me, as it was of my father, that my word is as good as my bond. I mean to pay every one of you to-morrow morning. Are you willing to trust me?"

"Sure, ma'am, an' the saints bless yez for the wurruds yez have spoken!" cried out an old Irish woman who had for many years been Salome's laundress.

"I'd take your word for anything, Miss

[CONCLUDED ON PAGE 22]

"And then Salome Burke, who never 'took part' in prayer meeting or spoke in any other public assemblage because of her timidity, spoke in a voice that was heard far up and down the street"

Embroidery Patterns

BY EVELYN PARSONS

THE waist indicated as No. 1 on this page is of lawn with Wallachian embroidery and lace insertion. The collar and cuffs are made of rows of lace insertion sewed together. Another effective way of making collars and cuffs is to sew rows of lace edge together, one row lapping a little over the next. A neat way to fasten them to the waist is to buttonhole them on, taking very short stitches over the extreme edge of the lace.

The Wallachian embroidery is a simple buttonhole stitch, and this nearly every woman can neatly execute. The correct slant must be given to the stitches, and to illustrate this we show a detail of the work. The center of the flower is a buttonholed eyelet. This is first padded with chain stitch, the eyelet punched and worked with buttonholing instead of the usual overcasting stitch. I advise padding the leaves and flower petals just a little at each side of the center line. The stitches are taken straight from the center line to the outer edge until toward the point of the leaf, when they are slanted slightly, the last stitch a short one and taken straight on the dividing line.

The stems are outlined. And now just a word as to the outlining, which is not always correctly worked. The thread should be held above or at the left of

WAIST NO. 1—WALLACHIAN EMBROIDERY

the needle, and each stitch should be taken back into the preceding stitch.

Notice where the outer row of lace on the waist front ends at either side under a leaf. The lace may be basted in place and the leaf worked over it, or the leaf may be worked, the lawn cut close to the buttonholing and the lace slipped under it. A method of inserting lace is described below.

WAIST NO. 2

Eyelet and solid embroidery are used on this waist of sheer lawn. If one prefers, the design may be carried out in all eyelet or all solid work. The edges of collar and cuffs are buttonholed.

THE WORKING COTTON

We use a soft ball cotton which has four threads in a strand. For fine French embroidery one thread is taken; for buttonholed edges and Wallachian embroidery two threads are used. Two threads are also used for eyelet work and outlining.

PERFORATED PATTERNS

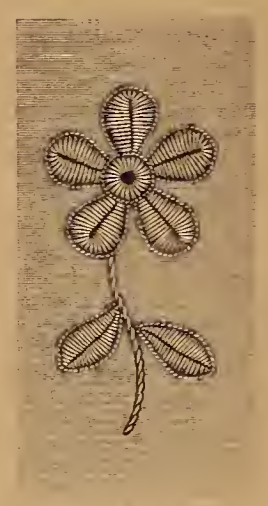
A perforated paper pattern is a transfer pattern of the embroidery design, and does not include the whole outline of the waist. The process of transferring the design to the cloth is a very simple one and is something that any one can do. For a transfer material we use a paste, and full directions for using this are given on the box. Blue paste is provided for light material and black for the darker. If good care is taken of a pattern—and good care means cleaning it with a soft cloth wet in kerosene oil after using—it may be used many times. If the pattern is crushed when sending it through the mail, press it *on the smooth side* with a warm iron.

RULES FOR APPLYING LACE INSERTION

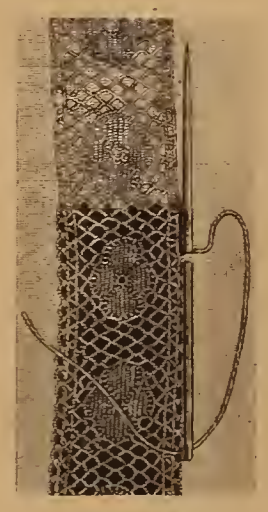
First baste the lace in place. With a large fagoting needle and fine thread (No. 90) feather stitch over the edge of the lace, taking the stitches on one side of the edge through lace and lawn, on the other through the lawn. Each stitch is taken back into the hole made by the preceding

The Housewife

stitch, and is a short, straight stitch. The stitches must be taken quite close to the edge of the lace and pulled tight. When the feather stitching is completed, the cloth is cut away from under the lace, the cutting done a little less than one sixteenth of an inch from the feather stitching. This might seem an insecure way of inserting lace, but it is a very strong one. The secret of it lies in the fact that each stitch is taken back into the hole made by the preceding stitch. If they were not thus carried back, the lace would pull out. The large needle makes these holes so large that it is possible to take the stitches in the correct place without any trouble.



BUTTONHOLE STITCH



LACE INSERTION

◈

Self-Effacement

BY MRS. W. L. TABOR

MR. BAXTER was reading the morning paper. He was seated in a cushioned rocking chair with his feet on the fender. He came across a catchy little article that amused him greatly. "Mattie, come here," he called to his wife, who was gathering up the breakfast dishes in the dining room. "I want to read you the best joke of the season."

Mrs. Baxter turned reluctantly from her work, went into the sitting room, and stood with martyr-like resignation while Mr. Baxter read the "good joke" to her. She did not join him in his hearty laugh at its conclusion, for she had failed to see the point in the joke, and she was eager to get back to her work in the dining room. She was thinking all the time of the beds to be made, the children to get ready for school, the roast and vegetables to be prepared for dinner and the sweeping to be done.

"John," said Grandma Baxter, "you could have taken the paper out in the dining room to read to Mattie; then she could have gone on with her work. I am afraid you are like many other men, you forget how precious the morning hours are to a busy housewife."

"Pshaw!" said Mr. Baxter.

"I have noticed, ever since I came here, that you and the children seem to be literally possessed with the idea that whenever you wish Mattie's attention, instead of going to her, you sit still and call her to you. Yesterday you called her from the ironing board to bring you the hammer out in the wood shed. Shortly afterward, Nelly started to school without her book bag, and she stood at the gate, and called, 'Ma! Ma!' until Mattie carried the bag to her."

Mr. Baxter did not seem to hear his mother's remarks, but turned his paper over noisily to find the rest of the article he was reading.

"Well," said Grandma Baxter, musingly, "the woman who effaces herself has no rights that anybody is bound to respect, and she gets no consideration from any member of her family, from the husband to the youngest child. No wonder so many women break down. They are nothing but machines in their households, supposed to always be in working order, and never tired of their work, no matter how disagreeable."

A mother who sets out to play the self-effacement rôle is always ready and willing to drop her sewing and cross the room to untie Johnnie's knotted shoe string; she never calls Johnnie to her. She leaves the bread she is kneading to go out in the back yard to settle the dispute between Jim and John. All day long these selfish exactions go on and are complied with.

Mothers—that is, most of them—never think anything too hard which they are called upon to do for their dear children, and thus the habit is formed of waiting on them, which causes the selfish exactions of children.

Do her children rise up and call her blessed? Does the heart of her husband delight in her? Far from it. Her children are more apt to be impertinent and her husband to be indifferent than to revere her. By her acquiescence in the apparent sentiment that she is a mere cipher, or at most a machine ready to go at their bidding, she sets the example for them to follow. It is, I presume, more from thoughtlessness than anything else that husband and children fall into these selfish habits, but the principles of justice, if applied soon enough, will forever debar the wife and mother from self-effacement and set her in her right place in her household. It is a trite but true saying, "The unselfish mother raises selfish children." And there are few children who will not become the embodiment of selfishness if that sentiment is fostered, and the best of husbands can be in a measure spoiled in the same way.

◈

Some More Potato Ways

BY MARY FOSTER SNIDER

POTATO FRITTERS—Beat three large boiled potatoes with a fork until light; add the yolks of three eggs and the whites of two thoroughly beaten, two tablespoonfuls of milk, two tablespoonfuls of grape juice, and a little lemon juice and grated nutmeg to season. Fry in tablespoonfuls in deep, boiling-hot lard to a delicate brown; when done, drain a moment on blotting paper or unglazed brown paper, sprinkle with white sugar, and serve at once. Fruit sirups or a sauce flavored with fruit makes a delicious accompaniment.

SOUFFLE POTATOES — Peel the potatoes, and cut them lengthwise in slices about half an inch thick. Dry them thoroughly in a towel, and put them in a sauce pan with plenty of boiling butter or drippings. Let them cook for about ten minutes, then drain and let them get nearly cold. Boil up the fat again, put in the potatoes, and cook for five minutes longer. Sprinkle lightly with salt and pepper and serve at once. These are delicious with fish.

POTATO STRAWS—Peel as many potatoes as will be required, and shred them in pieces about three inches long; put them as prepared into cold salted water, and when all are ready dry them in a towel and put them in a frying basket. Cook until tender in boiling fat, then remove the basket from the fat, and stand it on a plate to drain. Let the fat boil up again, then put in the potatoes again to make them crisp, keeping the basket on the move. Lift them out in a minute or two, sprinkle a little chopped parsley over them, and serve at once.

POTATOES STUFFED—Peel and parboil eight or nine large potatoes, then scoop out some of the inside. Make a forcemeat with some bread crumbs, a little butter, salt, pepper, summer savory, parsley and a little finely chopped chicken or veal, and bind together with an egg. Fill it into the potato hollows, cover them with bread crumbs, put them on a tin in the oven, put a piece of butter on each, and let them bake until perfectly tender and nicely browned. Serve very hot.

◈

Stop Coughing

SIMMER gently together two ounces of sugar candy, five cents' worth of best Spanish licorice, one half cupful of whole linseed and one quart of water for two or three hours. Strain, and add the juice of two lemons. This is an excellent cough mixture.

◈

Jefferson Rolls

BOIL one pound of Irish potatoes, and mash smooth, and cream into them two tablespoonfuls of butter and one of lard. Work in a little flour, to cool the potatoes, before adding the other ingredients. Three pints of flour should be used for the rolls. Beat three eggs with two tablespoonfuls of sugar, add to the potatoes, and work in the remainder of

WAIST NO. 2—EYELET AND SOLID EMBROIDERY

the flour, to which add one teaspoonful of salt. Add three tablespoonfuls of yeast, and make up with sweet milk to the consistency of loaf bread. Rise over night. In the morning roll on a floured biscuit board, and cut into round biscuits, each one being about an inch thick. Let them rise two hours, and bake in a quick oven.

◈

Cleaning Up

THE short way to do things is the popular way, and in most cases the best way.

An easy way of cleaning copper kettles is to fill the kettle with hot water and polish the outside with a rag dipped in buttermilk or sour milk.

After peeling or chopping onions, hold the blade of the knife and the hands under the cold-water tap, allowing the water to run on them for a minute or two. This entirely removes all traces of onion, and is quicker and more effectual than any other method the writer has ever tried.

The mustiness in the teapot is from one of two causes. Either it is not properly rinsed out every day, or not properly dried. Rinse it with hot water every time it has been used, and dry it well inside and out. Put it away with the lid open, not shut. Once a week fill it with hot water, add a lump of soda the size of a nut, close the lid, let it stand until morning, and then scrub out with a little brush, rinse thoroughly, and dry as above mentioned.

Hot water and soap generally remove grease spots, but if fixed by long standing, use ether, chloroform or naphtha. All three of these must be used away from the fire or artificial light.

To remove hot tea and coffee stains, soak the stained fabric in cold water, wring, spread out, and pour a few drops of glycerine on each spot. Let it stand several hours, then wash with cold water and soap.

If a varnish or paint stain is on a coarse fabric, dissolve by saturating it with turpentine. Use alcohol if on a fine fabric. Sponge with chloroform if a dark ring is left by the turpentine.

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IMPORTANT NOTICE—Remit by money order, currency or stamps. To the amount of any check drawn on a bank not in New York City, ten cents must be added for exchange.

We cannot be responsible for packages sent through the mail, unless the necessary stamps or money for registration are added.

Note—We ask you if possible to send postal money orders made payable to Farm and Fireside in preference to stamps.

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Price List

Waist No. 1, Perforated Pattern	35 Cents
Waist No. 2, Perforated Pattern	35 Cents
Embroidery Cotton, per Ball	10 Cents
Stamping Paste (Blue or Black), per Box	10 Cents
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Beaumont Muffins

Beat three eggs very light separately, then add to them two cupfuls of sweet milk and two tablespoonfuls of melted butter. Stir in slowly one quart of flour and one teaspoonful of salt. Add two tablespoonfuls of yeast. When well risen, stir well, and drop from a large spoon into the baking pan. Bake very quickly.

◈

Beaten Biscuits

The old-time Southern beaten biscuit is mighty hard to improve upon. Into one quart of sifted flour work well one tablespoonful each of lard and butter and one saltspoonful of salt. After this is well worked in, moisten with one half pint of sweet milk, and make into a stiff dough. Lay on a smooth board, and beat with a hatchet or a flatiron until it blisters. This will take from twenty-five to thirty minutes. Then make into small round biscuits about half an inch thick, molding them with your hands. Pass the rolling pin over the top to make them smooth, stick twice deeply with a fork, and bake in a quick oven until light brown. The dough can be rolled out to the desired thickness and cut round with a small cutter, but the method given above is considered better.

◈

Laundering Colored Jumper Suits

The successful laundering of the popular jumper suits has always been more or less of a problem, and along this line "The Housekeeper" lends some valuable information.

"Take, for instance, a jumper suit in tobacco-brown linen or boys' Russian suit in the same color; after being washed with pure white soap and having salt in the last rinsing water, the starch should be mixed with boiling coffee (previously strained) instead of water, or it will leave white streaks and smudges all over the surface. Black goods may be treated in the same way.

"Use the ordinary hot-water starch, using boiling water in place of the coffee. While tan linen does not require special coddling, still some shades of buff and gray are liable to spot and streak. To obviate this, use one tablespoonful of black pepper in the first water; this will also keep them from fading.

"Most colors require either salt or vinegar in the rinsing water to fix them. As a general rule the lighter colors take salt; the darker, vinegar. Both are used in the proportion of one tablespoonful to one quart of water. When in doubt use both. For lilac, mauve or purples, vinegar will be found to slightly intensify as well as preserve the color. Blues are often ruined by their first trip to a careless laundress. Any shade of blue may be permanently fixed by soaking first in a bucketful of water into which an ounce of sugar of lead has been poured.

"If one wants a suit stiff it should be dried before starching—but in the shade, never in the sun, as colored clothes are sure to fade while wet, on the same principle that one bleaches white garments in strong sunshine. They should, of course, never be boiled. Pale green is a color that fades easily, but a little alum in the rinsing water will fix it.

"Tussah and other washing silks are so easy to wash and iron, requiring no starch, that they are very practical for summer outings where there is difficulty in getting regular laundry work satisfactorily done. One can wash and iron three or four little girls' tussah dresses in half an hour oneself, at a pinch, as they are ironed while wet. White wash-silk waists are useful in the same way, making it easy to have a supply of fresh waists, independent of delayed laundry bundles."

◈

Simple Remedies for the Home

A number of simple but quite effective remedies for the home are mentioned in a recent number of "McCall's Magazine."

"There is nothing more soothing in a case of nervous restlessness than a hot salt bath just before retiring.

"For brittle finger-nails, anoint the nails at the roots every night with vaseline or dip them in warm sweet oil. This will cause them to grow better, and they will not split.

"An excellent remedy for sprains is to boil wormwood in vinegar and apply it hot to the injured part, with a sufficient wrapping of cloths to keep the sprain moist, renewing the lotion occasionally.

"Every morning before dressing, sponge the neck, throat and chest with cold water, and rub dry with a large bath towel; not only will this make you less liable to take cold, but it will broaden the chest and fill out the unsightly little hollows. The throat also will soon become round and firm.

"If you shut your finger in a door or bruise it in any way, put it in water as hot as you can bear; in a few minutes change it for hotter, and keep it in water at least fifteen minutes. If the foot is bruised, take off the shoe and stocking, and immerse it in hot water from fifteen to thirty minutes, adding hot water often.

"Any one suffering from rheumatism should wear woolen clothing always next the skin, and be very careful never to get the feet wet or sit in damp clothes. If very thirsty—which is sometimes the case with rheumatism—drink only milk and soda, no stimulants. Try rubbing the body night and morning with a rough towel."

◈

Wheat Pancakes With Buttermilk and Eggs

Sift together two and one half cupfuls of flour, one half teaspoonful of salt and two level teaspoonfuls of baking powder. Stir one half teaspoonful of sifted soda into two cupfuls of thick sour buttermilk. Beat the yolks of two eggs. Add the prepared buttermilk, and stir into the flour mixture. Lastly, add the whites of the eggs beaten dry. When well mixed, bake a cake, and if it seems too thick, thin the batter with a little sweet milk.

Singer Talks

2. Things You Don't See in a Sewing Machine

¶ Don't judge *any* sewing machine just by the way it *looks*.

¶ Enamel paint and shiny varnish are good things, but they don't make a machine run well or last long.

¶ Experience and judgment and *intent* combined with manufacturing facilities, are the things *you* should consider before buying.

¶ These points, combined with a rigid system of inspection and tests, give a *lasting* value to every Singer Sewing Machine.

¶ You can't *see* them, but you *learn* them in the easy, effective working of every part—and their value becomes more plain to you after years of service.

¶ Every Singer is *perfect* when it leaves the factory—your daughter will say it's still perfect when you have no more use for it.

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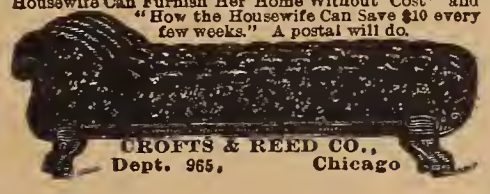

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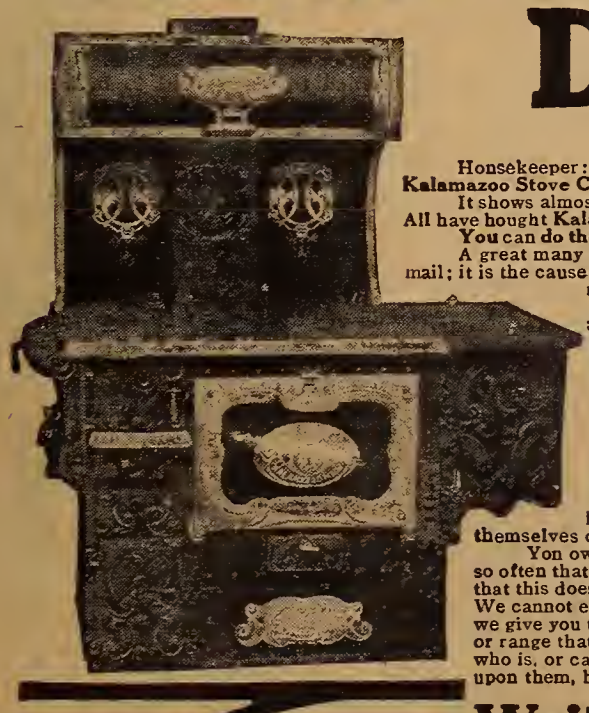

Honsekeeper: Make yourself a judge of **real values** in stoves hy sending us a postal today for our Big, Free **Kalamazoo Stove Catalog**—fully illustrated and about the size of a geography.

It shows almost all the towns that a U. S. Geography **could** show where satisfied users of **Kalamazoo** stoves live. All have hought **Kalamazoos,** direct from our largest stove factory in the world **at factory** prices.

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A great many housekeepers do not seem to appreciate the saving and the satisfaction of huying stoves and ranges hy mail; it is the cause of more or less interest on our part **why** they no not look into the matter hy buying a high-grade stove or range by mail from a **real manufacturer.**

This advertisement is written for two purposes: One is, on our part, to sell you a stove or a range, and the other is, to have you become interested enough in our effort to sell you a range, by your sending for our catalog and investigate our sellingproposition.

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Take 360 Days Approval Test

The only salesman we have is our freecatalog which Uncle Sam assists us in distributing all over the U. S. He has helped us to such a remarkahle extent that we have indnced a hundred thousand housekeepers in this country to avail themselves of our factory plan and prices which **save you all dealers' profits.**

Yon owe it to yonrself, to your family, to your happiness and to your satisfaction, to make this investigation. It has been proven so often that it is just as easy to huy a stove by seeing it illnstrated in a catalog as yon can hy seeing a stove in a salesroom of a store that this does not prevent thousands of people from purchasing in this manner. All that we have to say ahout our stoves is printed. We cannot evade anything that yon read. A salesman might tell you anything, which he conld afterward deny saying, if he chose to, but, we give you the henefit of every safeguard that our vast experience and snccess can give yon to protect you in the selection of any stove or range that you purchase. If you are not directly interested in huying a stove or range perhaps you can send us the name of some one who is, or can he interested. Yon may have some friends who do not read this paper, and if you nave, you will not only confer a favor upon them, hut will certainly do so upon us by sending us their names in addition to your sending for our catalog.

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All our cook stoves and ranges are equipped with patent oven thermometer which makes baking easy.

An Agricultural College on Wheels---By Morris Wade

Demonstration Wagon That Goes Direct to the Man in the Field and Teaches Him Improved Methods Adaptable to His Farming Conditions, and Also Shows the Housewife How to Accomplish Things With the Smallest Amount of Labor

There are some new things under the sun in the agricultural world. There are new methods of education brought about by the introduction of scientific farming and the demand of the people to farm in better and more productive ways. One of the new things in the South is the demonstration or agricultural wagon that goes from county to county with its corps of instructors teaching the people new and better methods of farming than they have hitherto known. The agricultural wagon is a very large vehicle built at the Tuskegee Normal and Industrial Institute. The size of the wagon is enough to attract the attention and the curiosity of the people wherever it goes, and they become more interested in it when they know what it contains. The wagon is fitted up with improved implements, such as may be used on any modern farm; for example, a cream separator, a milk tester, a revolving hand churn, a two-horse steel-beam plow, a one-horse steel-beam plow, a diverse cultivator, a spike-toothed harrow, a middle burster, a set of garden tools, a crate for the purpose of carrying the best breeds of live stock, such as Berkshire and Poland China pigs, Jersey and Shorthorn calves. The real object of this wagon is to place before the people concrete illustrations, and to prove to the farmer that he can do better work, make more produce on a smaller number of acres of land and at less expense. It is also designed to visit as many centers of influence as possible. The agent personally shows what is meant by deep cultivation and thorough preparation of the soil. In addition to this the agent carries on what is known as the Farmers' Co-operative Demonstration Work under the United States Department of Agriculture, of which Dr. S. S. Knapp is the special agent in charge. In this work the field agent is expected to visit all thickly settled communities within the bounds of the given territory, hold farmers' meetings, pick out the most prosperous and leading farmers, and get them to set aside from three to five acres each to work according to the government instructions.

This wagon is really a kind of farmers' college on wheels. If the farmers cannot go to college, why, the college can go to them. It is not enough to get the sons and the daughters into the agricultural schools and give them object lessons in good farming; something must be done for the fathers and mothers who cannot go to school. The Tuskegee Institute agricultural wagon is called the Jesup Agricultural Wagon because it was given to Tuskegee by that great-hearted philanthropist, Mr. Morris K. Jesup, and his wife. It is worth while to add that the wagon was made by the students of Tuskegee, and even the harness worn by the horses that draw the wagon was made by the students. The wagon method has the very great advantage of going direct to the man in the field, where improved methods can be adapted to his peculiar conditions.

THE DEMONSTRATION WAGON OF TUSKEGEE INSTITUTE

The improved farming implements are carried into the field, where the farmer can see for himself just how they work and what an advantage they would be to him. Writing of the work of the wagon and the demonstrators who go out with it, Mr. Booker T. Washington says:

"After the farmer has plowed a few furrows we hitch up one of our improved plows. 'That may be a good plow for some,' he says, 'but for me, give me that old scutter.' We use our plow for a few minutes, and then ask him to compare the amount of work done and the kind of furrow made. After that we can hardly get away from him. The farmers often try to borrow some of our implements, and one man insisted that we remain at his house until he could plow over his cotton. When we come across a man slowly plowing out his corn field, we take out the cultivator and show him that he can make seven furrows where he is now making one, and with the same animal. So convincing have these demonstrations been that many farmers have at once bought improved implements. It generally means that boys between the plow handles may stay in school longer. We often find the farmer's wife and children out in the field scattering fertilizer. A distributor taken from our wagon shows the farmer that there is a quicker and a better way, and his family may at the same time be free to do something else. Great stress is laid upon the importance of the farmer mixing his own fertilizer. Many of them are renting land at two dollars and fifty cents an acre and paying out one dollar and fifty cents an acre for fertilizer. The wagon carries samples of the different kinds, and the farmer is taught the amount needed by his land for a certain kind of crop, and just how to mix it."

It is worth while to state that the demonstration wagon is designed quite as much for the benefit of the women as well as for the men on the farm. The necessity of the wife and mother knowing how to do her work properly and to the best advantage will at once be recognized by those who have given the matter any consideration. The farmer's wife is shown that there are better churns than the tiresome old up-and-down "dasher" that was the bane of the farmers' boys and girls generations ago and that is still in existence on many farms.

After the demonstration wagon has made the rounds of a community, and a large number of farms have been visited, a mass meeting is held in the open air, and the farmers and their families come in large numbers not only for the opportunity for sociability the event offers, but to witness the demonstration to be made for their benefit. Two stalks of corn are produced—one green, with one or two well-developed ears, the other "fired" and dying, without an ear of corn.

"What makes the difference?" is asked.

"One hasn't been worked," is replied.

Then the man who has raised the good stalk of corn is called out and asked to tell the others the secret of his success.

"I fertilize my ground," he says. "I plow deep. I do not wait until the grass gets a start before I begin to cultivate. I spend my Saturdays in the field instead of letting all my work drop while I go to town."

Everywhere is preached the gospel that the cultivator of the soil should make every effort to own his own land instead of renting it. Since the twenty-fourth of last May, when the demonstration wagon first started out, it has given instruction to more than two thousand people a month, and it cannot respond to all the calls for its services. Of course, the great majority of the farmers in the South visited by the wagon are colored people, but a great many white people come to the mass meetings, and white owners of large plantations are asking for the wagon to visit them for the benefit of their tenants. This college on wheels could do service in communities where the standard of intelligence is higher and all the conditions are more favorable than in the South, and the introduction of the demonstration is one of the many good things for which the farmers of the South must thank Mr. Booker T. Washington.

The Great Work of the Railway Church---By John Dorchester

It is only in the West, and usually in the rural districts or in small towns remote from the larger cities, that one sees the chapel cars that run here and there carrying the religion of Christ to the people. What is a chapel car? It is nothing more nor less than a church on wheels that moves from town to town. This car is in exterior appearance exactly like any ordinary passenger car, but is very much unlike a passenger car in its interior. On the outside of one of these chapel cars one may read these words from Holy Writ: "Go ye into all the world and preach the gospel to every creature." On the inside of the car are seats for at least one hundred and twenty-five persons. There is a pulpit and also an organ. In the seats are Bibles and hymn books, just as there are in a church. The Baptist denomination runs these chapel cars, and there are now five of them bearing such significant names as "The Messenger of Peace" and "The Evangel." It is seventeen years since the first of these cars rolled on its way out to the remote and sparsely settled towns of the West where there were no churches. That railroad companies believe these cars to be a good thing, and that they are glad to encourage the work, is evidenced by the fact that railroads make no charges for running the cars over their lines, and the presidents and general managers of railroads have contributed toward the building of the cars. They believe that one of the best things for the new towns on their lines to have is a church, and the visit of the chapel car to a town not infrequently results in the building of a church in the town.

One of these chapel cars will take Kansas or Nebraska for its territory, while another may take Missouri. "The Messenger of Peace" spent many weeks in Missouri, while another car was out in Colorado. "The Messenger of Peace" has rather an interesting history, since it was built by seventy-five Baptist women, who each gave one hundred dollars for this purpose. Then the Baptist church in Yonkers took upon itself the work of equipping the car. It is something of a surprise to the people of some of the little Western towns, in which there are as yet no churches, to get up some morning to discover that a church has arrived over night, and there is never any lack of an audience when the hour comes at which service in the church on wheels is to be held. Often the entire population of the town assembles in and around the car, and the preacher sometimes preaches from the platform, that all may hear. Sunday schools are organized while the car is in the town, and church organizations are also effected. One may see in the West many neat little churches or chapels resulting from the visit of one of the chapel cars to the town five, ten or twelve years ago. The result of the stay of a chapel car in Del Norte, Colorado, was of special interest, because of the fact that the people became so interested in the idea of having a church, that a fund was raised at once, and a building that had been used as a wholesale whisky house was purchased and remodeled for a church.

"The Messenger of Peace" stayed six weeks on the railroad track in the town of Novinger, Missouri, and services were held every night, in addition to afternoon meetings for the boys and girls. The result was that a mass meeting of the citizens, irrespective of creed, was held, and it was voted to build a church. A committee composed of one Methodist and three men who had never professed religion was appointed. Each member of the committee gave fifty dollars toward the proposed church building. Then one of the committee "threw in" a lot for the church, and another one said that he would give the raw timber for the church. Seventeen men then responded to a call to go into the woods and cut the timber for the church. Other men who owned timber agreed to haul the fallen trees to the sawmill, where the owner of the mill sawed them into lumber without charge. Then some of the work of actually erecting the church was done without charge, and the final result was a neat little chapel.

A CHAPEL CAR AND GROUP OF GOSPEL WORKERS

Sometimes the chapel cars go to towns in which there are churches, but the interest is not very great and there is need of a revival of interest. On one instance a chapel car rolled into a town in which the church had been abandoned and the churchyard had been planted with corn and pumpkins. When the chapel car went on its way it left the church open, with regular services being held. Sometimes the car is side tracked near the railroad workshops, and special services are held for the men during the noon hour, when they come in in their working clothes, and even with their pipes in their mouths. Then, when a car is away out on a side track in some little treeless town on the Western plains, people ride fifteen and twenty miles to attend the first religious service some of them have been able to attend for years. Or the missionaries in charge of the cars may go far out over the prairies to visit some sick or dying persons or to carry the consolations of religion to the aged and the infirm who cannot leave their homes. This is good work, and the chapel cars are always welcome in the towns to which they go. Indeed, the missionaries cannot respond to all the calls they have from towns for the chapel cars to visit them.

THE IMPOSTOR---By Frank E. Channon

Synopsis of Previous Chapters in February 25th Issue

CHAPTER XVII.—CONTINUED

THEY struggled and fought together on that mountain of fire, while below them roared its awful depths. Nearer and nearer to its yawning mouth they drew, each unconscious of his danger, while around them raged the din of battle, every man fighting for his life. Then Rudolf saw his danger. The King saw it, too. The Duke cried out in fear. Amos laughed fiendishly.

"You villain, you shall yet get your deserts!" he cried.

"Help! Help!" shouted Rudolf in a frenzy.

Too late! With a superhuman effort the wounded King lifted him high off his feet; he cast him from him, and hurled him down the yawning chasm, then, reeling back, fell exhausted and unconscious on its brink.

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CHAPTER XVIII.

THE CRY OF THE VOLCANO

DOONROON was in an uproar. The dead and wounded were being brought in. The Count Cassell was under arrest. Crowds of people paraded the streets, singing and cheering for the King and Queen—the King, who lay so still upon his bed in the darkened room of the château; the Queen, who, nearly beside herself with grief, sat and watched over her fast-sinking husband. The populace cheered for the secretary, who limped to an open window, with a very serious face, and raised his hand to enjoin silence. A hush fell upon the crowd before the royal house.

The Count Benidect spoke to them.

"There must be no noise, no cheering," he said. "Your King is grievously wounded; he is in grave danger. But there is always hope left to us while there is life. Disperse to your homes. Be quiet; be orderly. All who are guilty in this terrible affair will be brought to justice and punished. The traitor, Duke Rudolf, of Roumania, is dead; he has gone to meet his great Judge. Disperse, I ask you."

The old man waved his hand, and the crowd slunk away.

He made his way noiselessly back into the sick room, the secretary leaning upon his arm.

Edna was on her knees before the bed, her eyes dimmed with tears; she looked up at them with her beautiful, pleading eyes. Her voice was too choked for utterance. Two physicians sat watching the unconscious monarch. The elder man raised his head as the Count came in. He made a negative movement in answer to Benidect's unspoken question.

"No," he whispered, "there is no change. We can do nothing unless he becomes stronger. We dare not probe."

Oxygen was being pumped into the room to sustain Amos; he was in "extremus." Scarcely a movement was perceptible. He was in the valley of the great shadow. The grim angel of death hovered over his bedside.

"Call me," whispered Donnaly, as he slipped away, "if there is any change."

"It may occur at any moment," replied the doctor significantly.

Edna could control herself no longer. She buried her face in her hands and burst into sobs. They led her gently away.

The minutes and the hours dragged by and still there was no change. Amos still fought for his life with his grim, silent foe. And then toward morning a change occurred—a joyful change, a change for the better. Amos regained consciousness.

"Edna? Where?" he breathed softly.

She was at his side in a moment. "Here, dearest," she answered.

"I shall get better," he said. "I shall get well."

She pressed his listless hand, and whispered gentle, loving words to him.

The doctor nodded reassuringly. "You are on the mend, Your Majesty."

"Have you? Have you?" labored the King, and touched his side.

"Not yet, sire; later, later."

"Two," said Amos, and dozed off again.

The King did recover, thanks to a naturally strong constitution and an always carefully led life, but it was weeks before he was about again, looking pale and worn. Fresh air and careful nursing did wonders, however, and very soon he commenced to look like his former self. By slow degrees he pulled himself back into condition, a state which none knew better than he how to do. By careful diet, but gradually increasing exercise, he "rounded into shape again," as he expressed it, until on that great "Thanksgiving Day" which was appointed by the clergy to render gratitude to heaven for his recovery and restoration to health and strength, he looked and felt like his former self, the old glow of health in his face and the old swinging stride in his walk. The King was well. "Long live the King! "Long live the King!" and as that time-honored acclamation rang through the dome of the old church, Amos offered up a prayer of thanks that he was spared to live and enjoy the happiness which was now his, in the society of his loved one. But, like the serpent in the Garden of Eden, there ran through his mind the bitter thought that he was still a fraud, still an impostor, and again the query forced itself uppermost in his mind: "Where will it all end? What will be the grand finale?"

The grand thanksgiving hymn was sung; Te Deum Laudamus burst forth from the congregation; the organ pealed; the people departed, and all Mirtheium had rendered thanks for the restoration of its monarch.

Now all things resumed their old-time peace, and events moved smoothly along. The King attended with justice and sound judgment to the affairs of state, and all Mirtheium laughed. The past events were forgotten, and a great period of prosperity opened for the island kingdom, but throughout it all the great volcano threatened and muttered its warnings.

"It will never rest," the people exclaimed, "until the traitor Duke's body is removed from its pit. It is calling for it, calling for it all the time."

But the King only laughed when it was repeated to him.

"Let him lie there!" he said. "It is a fitting couch for so fiery a man."

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CHAPTER XIX.

"OLD CU" UTTERS WARNINGS

AND now the King in his spare time and leisure turned with renewed interest to his hobby, "The Clipper." Frequently he made ascensions in it, perfecting the little details which mean so much in delicately constructed mechanisms. The Queen would never accompany him.

"No," she cried, "I will never venture in it until I am compelled to."

"Then you never need to, dear," assured the King.

Little did he know how soon events were to give the lie to his words.

On the "Twelfth Day" festivities Amos gave a public exhibition of the practical workings of his "Clipper." The people were allowed to inspect it, and later he ascended and put her through her paces. In company with Donnaly and a working crew of five men he ascended from the grounds of the new palace, which was being built to take the place of the burned one. A fresh gale was blowing, the wind sometimes reaching a velocity of thirty-five miles an hour, but in spite of all "Old Boreas" could do, the "Clipper" invaded his domains and met him squarely face to face. She fought her way in the face of the gale at a ten-knot gait far out to sea, then turning gracefully, headed inland and circled the island. With the wind on his port, or starboard, quarter, Amos attained great speed, while with it dead in the rear, the "Clipper" fairly flew. It was impossible to remain on her deck when she ran before the gale. With her great rudder screws churning the air ahead and astern, her sixty-four propeling fans whizzing madly aloft, and her narrow, cigar-shaped hull racing through the air at a terrific rate, she made a truly imposing sight. All worked smoothly and without a hitch. The King's contention, his argument and theory had been proven. The conquest of the air had been accomplished with a heavier body, not a lighter one. Donnaly, for once, was silenced. He had to acknowledge defeat. He did so gladly.

"If we only had it at home," he kept repeating. "If we only had it at home, old man. There's a fortune in it."

"HOME!" How dear that word was becoming to the two chums, isolated and cut off of their own free will in this tucked-away, forgotten island, lost amid the Grecian Seas. Often and often they spoke about it; often and often they talked of it. They recalled their adventures and escapades, their trials and their triumphs. Neither had any near relatives, but both had many friends. Beyond writing that they were on an extended cruise and arranging with their bankers for the forwarding of such funds as they might find necessary, they had given no word as to their whereabouts. But then a man, or two men, for that matter, can easily drop out of New York life and not be missed. So the two compatriots found it. America had forgotten them, but they had not forgotten America.

Softly Donnaly hummed the familiar bars:

"Home, home, sweet, sweet home,
Be it ever so humble,
There's no place like home."

"Are you longing for it, Jake?" inquired his chum.

"We both are, you know that, old man. It's no use disguising the fact. We must long a little while yet, I fancy. I see no loophole of escape. We must stick it out here for a time. Something *may* turn up."

"Jake, why don't you take a run over. You need not stay here now, you know; there's no demand for you right at present. Things are quiet and everything moving smoothly. Why don't you?"

"What! And leave you here by your lone? Not if I know it, old fellow. There's no knowing what lot of trouble you might not tumble into without my guiding hand at the wheel. I can't trust you alone, Amos, old boy. You are not a safe man."

"Oh, I'm all right with Edna at my side," laughed Amos.

Donnaly's face fell, and a shadow flitted across it.

"I have no Edna, you see. I suppose that's what makes me get a bit homesick sometimes."

"Neither have you any Edna over there."

"I know I'm not anchored; you are. That makes some difference, I suppose. No use talking about it, we're here for a spell yet, I think. Some day, aye, some day—who can tell what may happen. We must wait for 'something to turn up,' I guess."

The Queen and Countess joined them under the orange trees ladened with their golden fruit.

"Now I wonder what you two are talking about?" she said playfully. "Some secret, I'm sure; I am getting 'real' jealous, as you say in America— Oh, I know," she remonstrated, holding up her hands, to command silence. "I know just what you are going to say. You're going to ask how I know what they say over there, because I've never been there. But I do know. I read lots and lots of your books and English books, and they all make the American girl say 'real' when she means 'very,' now don't they?"

"Ah, Edna," said Amos, "the word 'real' means something else to an American sometimes. It conveyed something different to us two as we were talking just now, for we were speaking of 'home,' and it is very 'real' to us."

Her face fell. "I know," she sympathized. "I often think of that, and often wonder if you are getting—what do you call it? Homesick, is that it? Are you?"

The King evaded the question.

"We have a saying in America that 'Home is where your trunk is,'" he laughed. "I expect that fits this case exactly, eh, Jake?"

"That's it;" acquiesced the secretary.

"Listen!" exclaimed the Countess.

A dull, distant roaring sound was audible. The earth was perceptibly shaken.

"Oh, it's only old 'Cu' fussing as usual," said Amos.

"He keeps it up more than he used to, though," remarked Donnaly.

"Well, the people say," began Amos, then stopped; a shadow had fallen across the Queen's face.

"Don't let's speak of that," she said.

Again the far-off thunderous sound filled the air, and again the earth trembled.

"Let us go indoors," suggested the Countess.

They rose and turned their steps toward the château. As they entered, a luminous glow spread over the eastern sky, rendered more brilliant in the waning light.

"Look!" cried Donnaly. "He's active now!"

Far into the evening air shot innumerable fiery rockets; a dull roar filled the atmosphere, and the earth shook and trembled like a frightened animal.

"Ugh! It's uncanny!" said Donnaly.

"To my mind, it's very grand now," demurred Amos.

"Let's go inside," again entreated the Countess, and the party entered.

'He clung to the racing, reeling tiller wheel as it spun madly around"

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CHAPTER XX.

AND FINALE

AUGUST 17, 190—, is a day marked in red figures in the calendar of the world's disasters. On that never-to-be-forgotten day subterranean disturbances of the most serious character occurred. On the Pacific coast of the United States of America whole towns were swallowed up by the devouring forces of Nature. The courses of mighty rivers were changed, and a giant tidal wave swept the coast line for hundreds of miles. Thousands upon thousands of people lost their lives in that awful catastrophe, and damage beyond all calculation was done. But the great western republic was not alone in its disasters. Following almost exactly the fortieth parallel, it swept around the entire world, striking all localities almost within the same hour (making allowances for the different time). From California it traveled across the American continent, then on out into the big Atlantic, where leviathans of the deep were swallowed up in its mighty waves, and the Azore Isles engulfed and lost forever. Lisbon, the unfortunate, was once more destroyed, its mighty, modern quay offering no more resistance than on the former occasion. Southern Spain the grim destroyer spared, but only to burst out again in even greater fury in the Mediterranean. Old Vesuvius sprang into destroying life and showered down his fiery rain upon the noble town and bay of Naples. Malta, England's outpost in the Mediterranean, was swallowed up completely; all its vast system of solid masonry fortifications succumbing as easily as the veriest sand bank. Athens trembled, but escaped, although its outlying islands were many of them submerged. The Grecian Archipelago suffered severely, one of its islands being engulfed, with a loss of many thousands of lives.

The convulsion continued on its devastating course through Turkey into Asia, where it rumbled itself out amid the wastes of the great Desert of Gobi, in northern China.

The morning of August 17th broke hot and heavy over the island of Mirtheium. For some days vaporous clouds had almost obscured the sun, but notwithstanding, the heat was terrible. An indefinable "something" was in the atmosphere, and a feeling of unrest permeated the population. The great volcano rumbled incessantly, and at night made the sky brilliant with its flames. The people gazed in awe at the uncanny spectacle, and shook their heads. The Duke's body still lay in its awful depths. "Cu" would never rest until it was removed, but the King only laughed and bade them hold their peace. He busied himself, when not engaged with the affairs of state, with his now famous "Clipper." He took long voyages far out to sea; he practised "diving" and "soaring," "wheeling" and "spinning." The "Clipper" was a "bird," literally and figuratively. She was a most pronounced success, but the Queen could never be induced to board her. "Never!" she cried. "I can never be made to come on it!"

"But why, dearest?" Amos insisted.

"I cannot trust it. Some day it will fall, and oh, Amos, I wish you would not go on it. I am so afraid for you. I watch it anxiously all the time you are up as long as I can see it, and when finally it has soared out of sight, I sit and pray for you."

"But, Edna, can't you understand that it can never fall—never, I tell you. Why, even should one complete set of fans refuse to work, I can save myself by the other: the propelling can be made the sustaining, or the reverse. It can never fall!"

"I know, I know!" she cried with all a woman's reasoning or lack of reasoning. "But it may, it may!"

"Never!" he said firmly. "Never!"

And this was the only subject on which the King and Queen disagreed.

On that never-to-he-forgotten morning the King breakfasted alone. Edna complained of feeling unwell, and remained in her rooms. Late that afternoon it was Amos' intention to start, in company with Donnaly, on an extended trip. He wished to pass over the maze of islands to the south, the Cycladis, and keeping between the shores of Greece and Crete, sail through the Ionian Sea and by way of the Straits of Otranto into the Adriatic Sea; thence, mounting over the great Shar Dagho Mountains of Roumelia,

[CONTINUED ON PAGE 20]

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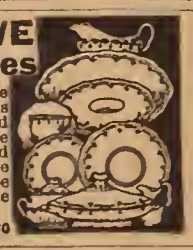

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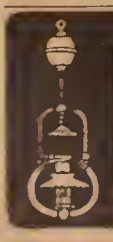

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MAKES AND BURNS ITS OWN GAS

Miss Gould's Fashion Page

No. 1123—Pointed Cutaway Coat

Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, five yards of twenty-seven-inch material, or three and one half yards of thirty-six-inch material.

SOME months ago Paris was emphasizing the pointed effect in fashions, both for tunic draperies and for coats. The pointed idea is now very generally the fashion in America. A particularly smart-in-style garment is the pointed cutaway coat illustrated on this page. For a spring and summer coat-and-skirt suit this model would be particularly desirable, developed in mohair, worsted suiting or linen, while it is also a good design for a separate coat. The pointed effect is shown at the back of the coat as well as in the front.

If you happen to need a separate coat, one which you can wear not only this spring and summer, but next fall, too, you will be safe in selecting this pointed cutaway and making it up in dark blue serge with black silk or dark blue silk braid for the trimming.

MANY of the most fashionable dresses this spring are braided. Narrow soutache braid is used in great profusion not only on cloth and silk, but on sheer materials like chiffon, where it is much seen as a trimming for imported blouses. It is always well for the woman who must study economy in planning her clothes, to know what is the very latest mode, for then she can put on her thinking cap and see how she can adapt the new style to her own individual need.

In making over a dress where it is necessary to combine some old fabric with the new, braiding comes in most conveniently. Such a gown is illustrated in designs Nos. 1096 and 1097.

I want every reader of my fashion pages in Farm and Fireside to feel that she may come to me with all her little perplexing dress problems, and that in every way that I can I will help her, through a personal letter. If at any time you wish to know the prevailing fashions and the fashion novelties as seen in the big New York shops, just say so, and I will gladly include the information you require in my letter.

In regard to the two little conveniences illustrated on this page, I will send a personal letter to any subscriber of Farm and Fireside who wishes to know where they may be purchased. Send your letter, enclosing a stamped and self-addressed envelope, to Miss Gould, care Farm and Fireside, 11 East 24th Street, New York City. GRACE M. GOULD.

A little white wicker basket filled with emery. The top is velvet, and tiny ribbon bows decorate the handles. The baskets have red, pink and pale blue tops. They cost twelve cents.

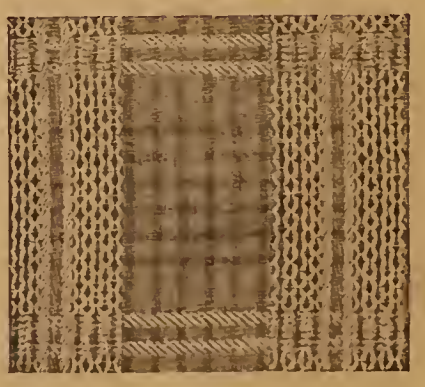
This hat is suitable to wear with a spring tailor-made costume. It is brown and white straw, trimmed with white breasts, brown wings and straw cabachons.

No. 1096—Waist With Mousquetaire Sleeves

Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, four and three fourths yards of twenty-two-inch material, or three and one eighth yards of thirty-six-inch material, with one half yard of embroidery for collar and one half yard of lace for chemisette.

No. 1097—Three Piece Skirt With Fan Back

Pattern cut for 24, 26, 28 and 30 inch waist measures. Length of skirt, 41 inches all around. Quantity of material required for medium size, or 26 inch waist, seven and one fourth yards of tweuty-two-inch material, or five yards of thirty-six-inch material.



FOR an inexpensive summer dress nothing is prettier than the cotton voiles. Both in color and design they rival the imported silk voiles. Those showing a stripe in an open lace effect, as illustrated above, are extremely dainty and pretty. There are also plaid and check voiles, and others showing a dot in self or a contrasting color. The cotton batistes are also pretty this spring, and show many combinations of colors in stripes of different widths. Very pretty little evening dresses for summer wear can be made of the novelty swisses, showing crossbar effects, dots and stripes.

No. 1112—Lingerie Waist With Yoke

Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, two and three fourths yards of twenty-two-inch material, or two yards of thirty-six-inch material, with three eighths of a yard of inserted tucking for collar and armband, and one half yard of all-over lace for yoke.

THE lingerie blouse, finer and softer than ever, will be extremely fashionable this spring. It will show much hand embroidery and exquisite lace, and the combination of coarse and fine lace will also be used in its making.

Many yoke effects will be seen. As for the frilled-front waist, it is fighting hard against the new form-fitting tendency, and the indications are that it will live in fashionable favor all through the spring and summer.

The tailored waists are seen both in the washable cottons and the silks, especially in the latter in striped designs.

Filet net waists darned in colored silks will be specially the vogue this spring, and they will be much worn as a guimpe for the princess dresses. Net waists trimmed with velvet buttons and velvet bands are also good style.

The ultra-smart woman will have a number of her shirt waists made of satin messaline this spring, and rather severe will they be as to cut. They will have the long shirt sleeve, the box plait down the front, either one or two pockets, and she will wear them with an embroidered linen collar and either a lingerie or a little butterfly satin bow.

WOMEN should always remember that to be well dressed they should, after all, dress to suit themselves. It is wiser to study first their own figure and their own coloring, and then select from the new fashions whatever will suit their own particular style the best. There are certain styles each season that, no matter how fashionable they are, should be carefully avoided by the woman who ought to know at a glance that they will make her look less rather than more attractive.

EXTREMES in millinery seem to be on the wane. Many of the new hats for Easter are in the smaller shapes. Turbans and toques are good style, and also sailor shapes, trimmed with an embroidered ribbon band and two quills or wings. The owl's head both in natural and gay colors is a fashionable trimming combined with wings. Many of the new hats flare at the side, and at least half of the imported models show the high crown.

SINCE eyelet effects are so much the fashion in both embroidery and cut work, this new stiletto with a gage is sure to be in demand. It makes it possible to pierce holes of any size, and the convenient part of it is that the gage can be so adjusted that the holes pierced will be the same size every time. The gage may be slipped up and down on the stiletto and fastened just where you want it for making holes of a certain size. The stiletto with an ebonized handle costs twenty-four cents, and with an attractive pearl handle, forty-nine cents. Extremely pretty jumper waists and also odd-shaped yokes can be made of satin pierced with eyelets, finished with a buttonhole stitch worked in fine silk. Shaded French knots may be used on the satin to outline the eyelets.

Miss Gould's Practical Fashions for Spring

No. 907—Vest Jumper With Guimpe

Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, one and three fourths yards of twenty-two-inch material, or one and one fourth yards of thirty-six-inch material, with three yards of all-over lace for the guimpe.

No. 852—Seven-Gored Skirt

Pattern cut for 24, 26, 28 and 30 inch waist measures. Length of skirt, 41 inches in front. Quantity of material required for medium size, or 26 inch waist, six and one half yards of thirty-six-inch material, or five yards of forty-four-inch material, with one yard of thirty-six-inch material for the bands.

No. 949—Dressing Sacque With Two Different Collars

Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, four yards of twenty-seven-inch material, or three yards of thirty-six-inch material, with five eighths of a yard of all-over lace and five yards of lace for frills.

No. 749—Princess Petticoat

Sizes 36, 38, 40 and 42 inch bust measures.

No. 1088—Tucked Shirt Waist

Sizes 32, 34, 36 and 38 inch bust measures.

No. 923—Loose Coat With Pointed Revers

Sizes 32, 34, 36 and 38 inch bust measures

No. 924—Plaited Five-Gored Skirt

Sizes 22, 24, 26 and 28 inch waist measures.

No. 756—Surplice Russian Suit

Sizes 2, 4 and 6 years.

No. 990—Jumper Dress With Guimpe

Sizes 6, 8 and 10 years.

We will furnish a design for every pattern illustrated on this page. Send your orders to the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

No. 1061—Wrapper With Round Yoke

Sizes 32, 34, 36 and 38 inch bust measures.

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NOTE—This offer does not include the Roosevelt picture.

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No. 1080—One-Piece Russian Dress

Sizes 4, 6, 8 and 10 years.

Before It is Too Late

BY BERTHA LANTJE, AGE FOURTEEN

If you've a gray-haired mother
In the old home far away,
Sit down and write the letter
You put off day by day.
Don't wait until her tired steps
Reach heaven's pearly gate,
But show her that you think of her
Before it is too late.

If you've a tender message or a
Loving word to say.
Don't wait till you forget it,
But whisper it to-day.
Who knows what bitter memories
May haunt you if you wait,
So show them that you care for them
Before it is too late.

◈

Where a Famous Book Was Written

BY H. H. H.

What countless thousands of boys and girls have found delight in reading the stories written by Louisa May Alcott, who has had no real successor. She has had many imitators, but none of them has been able to give her books for the young the charm Miss Alcott gave hers. Best of all, they were among the "safe" books written for young people. Fathers and mothers could always feel sure that there was nothing in Miss Alcott's books they would not want their boys and girls to read.

The other day I stood before the unpretentious old house in Concord, Massachusetts, where Miss Alcott wrote a number of her books, and in this house she wrote the "Little Women" that was the forerunner of fame and fortune for her. Concord is twenty miles from Boston, and it is a town every young person should resolve to visit at some time in the future, if it is possible to do so, because it is so rich in literary and historical associations. The Alcott family lived here for many years, and they lie buried in Concord's famous "Sleepy Hollow" cemetery.

The house in which Miss Alcott wrote "Little Women" is called "Orchard House," and it is most delightfully situated. It was once a farmhouse, and something of its age may be known from the fact that it was an old house when the British marched by it in 1776, so it was a very ancient house when the Alcotts moved into it.

The Meg, Jo, Beth and Amy of "Little Women" were very real children, and that is why all that Miss Alcott wrote about them was so true to life. They were, in fact, Miss Alcott and her sisters, and the boys in "Little Men" were the sons of her sister, Mrs. Anna B. Pratt. The Alcotts were just as poor as Miss Alcott represents them to be in the first chapter of "Little Women," where we find Meg saying that "It's so dreadful to be poor," and Beth says gratefully, "We've got father and mother and each other."

"Little Women" is a very real book written out of a real experience by a woman who had a "warm spot" in her heart for all childhood, and whose death took from the world one of the most gifted writers for the young that our country has ever produced.

◈

The Death Leap

BY LESLIE WADE, AGE FOURTEEN

The Indians have preserved some of the old legends. Here is one of them:

A party of Indians was on the war path, trailing a band of a particular enemy, when they came across a place where they might take a short cut and head off their enemies. This place was a high precipice broken by small niches and ledges. For the first three or four ledges everything progressed nicely. But when they reached the fourth ledge, they found, to their dismay, they could get no further, as the next ledge was nearly fifteen feet down. Neither could they go back up, for they had been obliged to drop a short distance to reach the ledge they were now on. Then they sat down and smoked their pipes before preparing to jump from the cliff. The first warrior then sang his death chant and leaped from the ledge. The rest did the same, until but two were left. One of these was a young boy, and he would not jump. But his elder pushed him off, and then followed.

But wonder of wonders! When he reached the bottom of the precipice he found them all alive, crawling out of a huge snow bank.

"ORCHARD HOUSE," CONCORD, MASSACHUSETTS, WHERE "LITTLE WOMEN" WAS WRITTEN

◈

Elsie Wood and Her Skates

BY FLORENCE M. HOOKER, AGE ELEVEN

Elsie Wood had come with her father and mother to live in the beautiful state of Ohio. She could not dress as well as the other children, but she was a kind and loving little girl.

All of the school children were skating on Mr. Burton's pond but Elsie, and Edith called out, as she skated by, "Why don't you skate, too?"

"I have no skates, and no money to get any," said Elsie.

Edith went up to the girls, and said, "Girls, Elsie Wood hasn't any skates, and no money to get any. I feel very sorry for her."

The next Monday morning Elsie found a bundle under her desk. It was a pair of skates. The children were smiling, and she knew where they had come from.

"Oh," said Elsie, "how can I ever thank you."

So the next day found Elsie out on the pond with the rest of them, and looking very happy.

◈

Donald's Experience

BY EDNA WILLIAMS STRONG, AGE THIRTEEN

Donald was walking leisurely along a path in the woods, when a rabbit ran a short distance in front of him and sat down upon its haunches. Donald threw his gun to his shoulder, and shot it.

In a little old house a short distance away lived a poor old lady, and so Donald, thinking the rabbit would make a nice meal, skinned and cleaned it and took it to the lady's house.

When Donald told the lady why he brought it, her face brightened, and she thanked him over and over again.

"You are just the kindest boy, just like my boy used to be," said the old lady, with tears in her eyes; and taking him by the hand, she led him in and offered him a pair of mittens which she had just finished knitting.

"Oh, thank you," said the boy; "but please keep them and sell them, as you were going to."

"I wonder if she thought I shot that rabbit just to get a pair of mittens," Donald said to himself as he walked slowly homeward.

Donald was very much mortified, and did not go for his intended ramble in the woods.

The Puzzler

CHARADE

Complete I'm found in every flower
That decks the field or blooms in bower;
Remove my primal letter, you
In Latin or conjunction view;
Remove another. I'm a word
In church and cloister often heard;
A third cut off, and me you meet
In troops parading every street.

DOUBLE ACROSTIC

1. An insect.
2. Aboriginal.
3. A drain.
4. A lip or lip-like organ.
5. The morning.
6. A small mug.
7. A delicacy.

The initials and finals will each name a powerful country. The words are of the same length.

RIDDLES OLD AND NEW

43. How many sticks go to the building of a crow's nest?
44. What relation is that child to its father who is not its father's own son?
45. What tune makes everybody glad?
46. How can you make a horse fast?
47. What did Adam first plant in his garden?
48. When is a piece of wood like a queen?
49. As I was going on my way I found a thing rolled up in hay. 'Twas neither fish, flesh, blood nor bone, and in three weeks it walked alone.
50. There was a man went out to hunt, and his dog went with him. The dog neither went in front nor behind nor on the one side. Where did the dog go?
51. What fish is found in every bird cage?
52. What fish is given to melancholy?
53. What fish is a whole world in itself?
54. What three great writers' names might you think of if you were watching a house burn down?
55. Why is a hound like a man with a bald head?
56. What word of only three syllables combines in it twenty-six letters?
57. Why is the world like music?
58. What did the spider do when he left the ark?
59. What is the difference between a man going up stairs and one looking down?
60. Who was Jonah's tutor?
61. When did we first hear of paper currency.

ANSWERS TO PUZZLES IN THE MARCH 10TH ISSUE

Oblique Rectangle—

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      S
    F U N
  F A R E S
S U R F A C E
  N E A R E S T
    S C E N T E D
      E S T U A R Y
        T E A R Y
          D R Y
            Y
```

Riddles—24. A secret. 25. Nails in your shoes. 26. Watermelon. 27. A shoe. 28. Ohio. 29. Milwaukee. 30. It makes aunt pant. 31. The multiplication table. 32. Toulon and Toulouse (too long and too loose). 33. It follows the C (sea). 34. Because they are often wrung for company. 35. The letter M. 36. One pours with rain and the other roars with pain. 37. It is hard to get enough. 38. It is of little use until broken. 39. A quarter to three. 40. Because we must B before we can C. 41. A carriage wheel. 42. When he takes a roll in bed.

The Impostor

[CONTINUED FROM PAGE 17]

back by way of the Gulf of Salonica into the Grecian Archipelago.

Provisions for three days were laid in, and the "Clipper" was overhauled and put in first-class condition.

By a strange whim of the King's, the anarchist, Davis, now formed a member of the crew. He had been taken away from his agricultural work, and was now second man on the dynamos. Amos had conceived a certain liking for the man, who now appeared to be thoroughly cured of his anarchistic mania.

"I told you I'd cure him," said Amos, "and I have. When I turn that fellow loose he will become a good, useful member of society."

"Ever hear the fable of the countryman who found the frozen snake and warmed it back to life again?" inquired Donnaly.

"Yes; but that doesn't fit into this case at all. You'll find I'm right, old man."

"Why, even old 'Cu' is protesting. Hear him grumbling!"

"Rot! He's doing that all the time."

"He's louder than ever this morning—Great Scott, what was that?"

Both men stopped short and looked around in alarm.

A dull, awful roar, such as they had never listened to before, filled the air. The artillery of men and the thunder of heaven sounded like popguns compared to it. This fearful sound was everywhere. It shook the earth like a feather. It was as if some mighty giant had picked the globe up in his hand and was crushing it—crushing it without an effort, as one might break an egg shell; but the egg shell was composed of the thunders of heaven and the heaviest cannon of man, and as he crushed it, they spoke, spoke with a roar and a crash, with shrieks and howls, with ear-splitting thunders and blinding lightnings, which sprang in an instant from a seeming calm. Nature in her wildest and most fearful mood had suddenly sprung into passion. The earth and the sea, the sky and the depths, all labored and roared together, and man, tiny, puny man, was swept away like ants before a flood.

"My God!" shrieked Donnaly, for once in his life utterly unnerved. "My God, Amos!"

They fought their way in blind, staggering steps toward the château. It was reeling and trembling under successive shocks. The people were streaming out like bees from a hive. Some prayed, some swore, some entreated, some were mute, but all sought to run, to run somewhere, to get away from something, they knew not what.

"It is the end of all things. It is God's judgment day!" warned an old minister. "Pray, pray, my children!" His voice was drowned by the roar of the wind. No one heeded him. The King and Donnaly were inside the reeling building. They sought their friends. They sought the Queen. They met her and the Countess hastening out. The old Count was close behind.

"Where, where shall we go?" he shouted.

"The waters! The waters! The sea! The sea!" the cry rose on every hand. "We are engulfed! We are lost! All is lost!"

"Mary, mother of God, save us!" muttered a devout Catholic, crossing himself.

"Come!" shouted Amos madly, as he seized the Queen and bore her away in his arms. Donnaly and the Count were hastening along the Countess.

"Where? Where?" hallooed Donnaly to his chum.

"The 'Clipper!' The 'Clipper!'" the wind whirled back the sound.

They struggled on, buffeted, battered and exhausted. The great steel hull of the flier stood like a mountain; it was anchored fore and aft. Its fans were stationary, exposed with the smallest area to the wind.

"Board her! It's our only chance!" shouted Amos.

He hustled his wife on deck, then down below. The three others followed. Five men were huddled below in the engine room, protected from the storm. They were the crew, caught aboard, as they worked at the preparations for the evening ascent.

"Cut her loose! Cut the cables!" ordered the King. "The island is flooded."

He fought his way on deck again, followed by a man or so and Donnaly. "Full speed ahead!" he shouted to those below as he gained the deck.

There was a droning sound. A mighty wave, an advance guard of the coming thousands, hurled itself against the "Clipper." She reeled under its stunning blow; she whimpered like a thing of life. Her cables parted. Her captain and crew scrambled below. Her fans revolved at lightning speed. She shot like a rocket into the storm-rent air. Up! Up! Whisked this way and that, careening this side and that, diving, soaring, now caught in a storm current, now in a dead calm, she was the plaything of the elements, while down below in the little cuddy hovered the terror-stricken passengers, grasping at anything, catching at everything, as they were flung about like dice in the shaker. Amos seized his Queen and lashed her to an upright; she was cut and bleeding. He clung to the racing, reeling tiller wheel as it spun madly around, in an effort to gain control of it. It broke away from him like a runaway. Then for one brief instant the "Clipper" ran into a calm center. In a second the King had the wheel again, and the ship was under control. She righted herself, and lay spinning, dizzily, unsteadily, like a drunken man, her fans and screws buzzing madly as they raced in the still air. Then she sprang forward with a bound and was in the storm again.

Up! Up! With her prow high in the air, and her decks at an angle of forty-five degrees, she soared. She cut her way in the wake of the hurricane, while beneath her lashed the ocean and above her roared the storm.

"By the hand that drove her forward,
As she plunged and yawed and sheered,
Woman, man, or God or devil,
Was there anything we feared?"

"Was it storm? Our fathers faced it,
And a wilder never blew;
Earth, that waited for the wreckage,
Watched the 'Clipper' struggle through."

Amos, his head stuck up into the massive glass manhole, tried in vain to pierce the storm with his eyes. All was inky darkness, rent every few seconds by blinding flashes of lightning, which for a brief moment would illuminate the surroundings, disclosing great banks and masses of vaporous clouds. Where were they? At what altitude, or how far they had come, it was impossible to determine. It was enough to know that they were in space and still alive.

Then in a twinkling a tremendous change

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The Impostor

[CONTINUED FROM PAGE 20]

occurred. As if running out of some great fog bank, the "Clipper" ran into clear, bright sunshine and gentle breezes. The storm died away, as if some magical hand had suddenly stilled it, and the "Clipper" sprang forward through the air at a terrific pace. Amos steadied her at once. Donnaly and the Count crawled out from somewhere, and one of the men cut the Queen's bonds.

"Keep her so," ordered the King, relinquishing the wheel to his second in command. In a moment he was at his wife's side. "My darling, are you hurt?" he cried.

The Queen opened her eyes. "No, no," she smiled. "I am well, only so, so giddy."

The Count was restoring his wife, and Donnaly and a man were busy endeavoring to force open the deck hole, which had become jammed in some way.

The next moment a cool draught of fresh air blew in upon them. A man sprang out on the deck.

"The sea below and many islands," he reported, as he saluted. "A long coast line away to the southeast," he added a second later.

Another man followed him.

"Candia!" he cried. "It's Crete, Your Majesty; I see Canea, the fire mountain!"

"Impossible!" cried the King, leaping on deck. "Are you sure?"

"Certain, Your Majesty; I once lived there in Canea Bay."

"Two hundred and fifty miles from Mirtheium," he muttered to himself; then, hastily glancing at his repeater, "And in nineteen minutes! Impossible! Absurd! One thousand seven hundred and thirty-three miles an hour!" He shook his head. No man could live at that pace—and yet—and yet—undoubtedly the island of Candia lay below them. When he last looked at his watch its hands marked the hour of eleven, lacking two minutes; that was as he was speaking to Donnaly just immediately preceding the outburst. Now it showed 11:17.

He scrambled back inside, bewildered and perplexed.

"We will descend," he said as he pulled the lever, and the sustaining fans commenced to decrease their speed; the propelling ones followed, and slowly the "Clipper" swooped toward the earth.

They discovered some terrified peasants crouching beneath a rock. They supposed the airship to be in some way connected with the upheaval of Nature, and were amazed beyond measure when they saw their fellow-men climbing down its rope ladders. With difficulty they were induced to approach, but at length they were coaxed to talk.

"Yes, this is Candia. Yonder is Canea, the fire mountain. See, he belches still! The waves have swept away a part of the land. Some of our people are lost. We are seeking their bodies."

Amos waited for no more.

"Come," he cried. "We must get back; we may be of use there yet."

The fury of the hurricane was spent, but the sea was running in great mountains of green waves. A hasty examination of the "Clipper," the tightening of a bolt here and a screw there, and once more they mounted into space. At a forty-knot speed they skimmed along, and toward evening the island of Khio, then Paara, Mitlene and Skyro loomed beneath them far off on either side. Where, where was Mirtheium! Only a churning, roaring ocean marked its place! Like a flash the terrible truth burst upon them all.

Mirtheium, Mirtheium, their island kingdom, was swallowed up—gone—gone, wiped off the surface of the sea. It no longer existed!

The Queen and Countess burst into tears; the old Count choked down a sob, and murmured, "Thy will be done." Amos and Donnaly stood looking blankly at the void. The erstwhile anarchist, Davis, together with one of the crew, had scrambled up on deck.

"Holy smoke," he cried in his Bowery slang, "the island's bin gulped down! It ain't there!"

The man by his side sobbed like a child.

"My wife, my child!" he stammered. "All gone! All gone! Oh, my God!"

He would have flung himself off into the rolling depths beneath, but kindly hands restrained him. He was led below, sobbing like a baby. "All gone! All gone!" he kept repeating.

The "Clipper" swooped low; she skimmed the surface as near as she dared; not a sign remained, not a vestige of the island kingdom of Mirtheium. Wreckage dotted the surface, but no sign of life. The island had been engulfed in its entirety!

Stunned and scarce able to realize the awful catastrophe the little party reassembled in the cuddy, while the prow of the "Clipper" headed for Athens.

"All is lost," sobbed the Queen. "We have nothing, we have no island, no home!" Then, nestling closer to Amos, that strong rock that had shielded her so well, she looked up at him. "All lost," she echoed, "all lost but you, Amos. I still have you, thank God!" and as he held her in his arms and soothed her, she smiled a happy smile through her tears. "I have lost my kingdom, but I still have my husband," she breathed.

And the old Count, as he comforted the gray-haired woman by his side, echoed the thanks, "I still have you, thank God!"

And Donnaly, moodily drumming his heels and feeling embarrassed, took up the refrain, as he muttered, "And I still have the United States—thank God!"

And Amos, as he rose and stretched his great frame, gave thanks, too. "I still have my Queen, and I am an 'IMPOSTOR' no longer."

THE END

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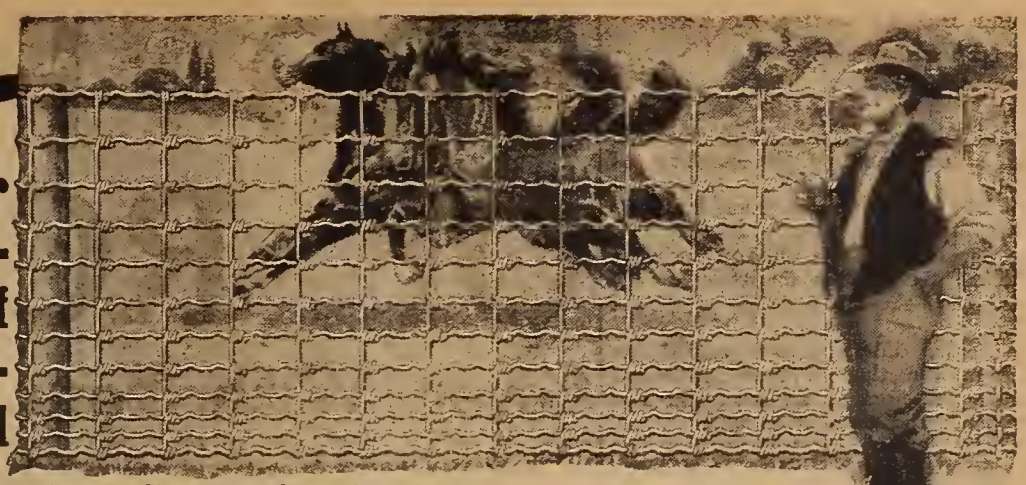

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Salome Burke's String of Pearls

[CONTINUED FROM PAGE 13]

Burke!" called out a big, burly fellow in the crowd.

"What's de matter wid Miss Burke?" shrieked a dirty boy on the outskirts of the crowd.

"She's all right!" came from hundreds of throats.

"Dree sheers for Miss Burke!" cried a stolid-looking German on the steps of the bank, and the "sheers" were given with a will.

Some of the Italian women wafted her kisses from the tips of their dirty fingers, and a white-haired old man, who had his little all in the bank, cried out:

"The Lord bless you, Salomy Burke! The Lord bless you and cause His face to shine upon you!"

She withdrew amid the wild cheers of the people, who went back to their homes or to their work serenely confident that all would be well, for honest Salome Burke had given her word to that effect, and her word was better than the bond of some others.

Mrs. Ezra Hopper and Mrs. Silas Jay walked homeward together. Both of them had small but hard-earned and carefully hoarded savings in the bank. There were tears in Mrs. Hopper's eyes and her voice was a little unsteady as she said:

"I always did say that Salome Burke was honest as the day is long. She's done to-day what I ain't a mite of doubt she feels that her honest old father would want her to do if a lot of poor folks was in danger of losing their all through the misdoings of his son. The Lord bless her!"

"Amen!" said Mrs. Jay fervently. And then she added, "You remember what you said once to me about Salome making for herself a string of pearls a good deal finer and more beautiful than the six-thousand-dollar string her sister-in-law has?"

"Yes, I remember."

"Well, she surely added a good many pearls to that string to-day. Don't you think so?"

"I ain't a doubt of it. You'd better stop here at my house and have a cup of tea with me, and we will talk it all over."

"I can't, because I have left a rising of bread at home that needs to be worked over and put into the oven. But I'll stop here at the gate and talk a few minutes."

While they talked, Salome Burke passed them on her way home. Her face wore its accustomed look of serenity, and she smiled as she said:

"Good-morning. Lovely morning, isn't it?"

"Say, Susan," said Mrs. Hopper, "I read a piece the other day about folks adding sunshine to daylight, and that's about what she's done to-day, now ain't it?"

Susan Jay looked after the retreating figure of Salome Burke, and said fervently:

"That's just what she has!"

◈

Pointed Paragraphs

A secret is something that a woman doesn't know.

But the trouble-borrowing germ is about the worst.

Don't get the habit of going around with your bristles up.

Men must either boss or be bossed—and the latter are married.

Failure is the only thing that any man can achieve without effort.

If a man has money to burn, his friends will gladly furnish the matches.

Riches have wings, but poverty crawls under the door and abides with us.

Is a man justified in telling a few white lies in order to make his wife happy?

A ten-dollar violin in tune turns out better music than a thousand-dollar piano out of tune.

Instead of doing things, there are lots of men who just sit around and make a specialty of knowing how they should be done.—Chicago News.

◈

Inducements

Mrs. Newlywed—"Doctor, that bottle of medicine you left for baby is all gone."

Doctor—"Impossible! I told you to give him a teaspoonful once an hour."

Mrs. Newlywed—"Yes, but John and I and mother and the nurse have each to take a spoonful, too, in order to induce baby to take it."—Democratic Telegram.

◈

Rule Worked Both Ways

Deacon (meeting a boy on Sunday morning carrying a string of fish)—"Johnny, Johnny, do these belong to you?"

Johnny—"Y-e-s, sir. You see, that's what they've got for chasing worms on Sunday!"—Pick-Me-Up.

LABOR LOST

Farmer—"I should think you would be proud of a catch like that."

The City Sportsman—"Well, I suppose I should be; but none of my friends saw me catch it, and nobody'll ever believe me when I tell them."

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Our Very Last Call

On March 31st the subscription prices of Farm and Fireside will be revised. We are unable to say just now how they will be changed. It depends very largely upon the number of our old subscribers who accept the liberal offers below promptly, and upon the number of new subscriptions sent us by our good friends on Farm and Fireside Day, March 31st.

However, we will be able to announce the change in prices in the April 10th number of Farm and Fireside. Up to that date, April 10th, we will hold open our present low-price offers, inasmuch as we are not able to announce to all our readers the change in prices sooner.

In order to let you get Farm and Fireside at the present low prices for several years to come, when others will be paying more, we will let you renew or subscribe right away—not for one year, but for three or seven years, if you act promptly! Don't delay! Even if you have renewed lately, renew again for more years still, and be sure of the low price.

To relieve the rush that would naturally come, and to show you onr appreciation for sending us your subscription promptly, we will send you the above great picture containing 500 different photographs of President Roosevelt, if you will accept one of the offers at the bottom of this page before we announce the change in prices in the April 10th Farm and Fireside.

Your Greatest Opportunity

This is the greatest and most wonderful picture ever made and shows the President in 500 different and characteristic attitudes. It cost us nearly $1,000. There is no other picture like it anywhere on earth. No other like it can ever be made of President Roosevelt. It is the most wonderful picture in America of the greatest living American. The size is 13⅜ x 20½ inches, printed on heavy coated supercalendered stock, all ready to put up in your parlor or sitting room the minute you get it.

Remember, this great picture is really 500 different photographs. Farm and Fireside has the exclusive right to reproduce it. This picture is so wonderful that five years from now it will be worth many dollars, and after President Roosevelt is out of public office, it will be almost priceless to your sons and grandsons. President Roosevelt has always been such a sturdy friend to the farmers, that we want a copy of this great picture to be in every American home—especially every Farm and Fireside home—so we make this offer:

How to Get Them

If you have already renewed your subscription for three or seven years, you can get this great $1,000 Roosevelt Puzzle Photograph with 500 different pictures of the President by getting one new subscriber to FARM AND FIRESIDE before the prices change. And remember this: the number of new subscribers and renewals our friends send us Farm and Fireside Day, March 31st, will have a lot to do with the future price of FARM AND FIRESIDE.

If you have not renewed, or if you have renewed for only one year, accept one of the three offers below. Then you will not only get this great picture, but you will also get Farm and Fireside at the present low price several years, when others will be paying more. This great picture is given only with a renewal or for getting a new subscriber to Farm and Fireside.

This great ensemble picture of 500 photographs is not only the most wonderful picture ever produced, but a remarkable and delightful *puzzle as well.* In all the 500 pictures there are just two exactly alike, and the puzzle is to find them. It will keep every one absorbed and guessing for days.

Remember, for your own renewal, or for one new subscription, you get absolutely without cost 500 photographs all in one—the most wonderful picture ever made—a picture that will be an ornament to your home as long as you live—an almost priceless ornament, the greatest triumph of the photographers' art; and besides all this, it contains one of the cleverest puzzles ever invented. Free with these offers up to April 10th, when the new prices will be announced, or with a new subscription.

OUR OFFERS—Good Only to April 10th

OFFER No. 1

$1.00

gives you Farm and Fireside 7 whole years—168 big, helpful numbers, the 500 photographs of President Roosevelt, and "The Great Roosevelt" Puzzle.

OFFER No. 2

50 cts.

gives you Farm and Fireside 3 whole years—72 big, helpful numbers, the 500 photographs of President Roosevelt, and "The Great Roosevelt" Puzzle.

OFFER No. 3

25 cts.

gives you Farm and Fireside 1 whole year—24 big, helpful numbers, the 500 photographs of President Roosevelt, and "The Great Roosevelt" Puzzle.

A Blue Mark

on page 3 shows that your subscription has expired or is about to expire. Renew it **NOW** by accepting one of these liberal offers.

RUSH THIS ORDER BLANK BEFORE APRIL 10th

FARM AND FIRESIDE,
Springfield, Ohio.

Gentlemen:—I accept your special limited offer No. ..... as advertised in the March 25th Farm and Fireside, for which I enclose..... Yours truly,

.....

.....

.....

.....

This coupon entitles the sender to the 500 Roosevelt Pictures mentioned above.

Wit and Humor

Knew the Family

VISITOR—"How do you do, Tommy! I've come to stay at your house a week, and I'm sure you can't even guess who I am."

TOMMY—"I'll bet you one thing."

VISITOR—"What?"

TOMMY—"I'll bet you're no relation of father's."—Harper's Weekly.

◈

Second Table

"You should try to be a little less assertive, my dear. Remember, 'the meek shall inherit the earth.'"

"Oh, yes, I dare say they will—when the others have done with it!"—London Opinion.

◈

The Limit

"He's no good at an argument, is he? Not at all convincing."

"Well, I should say not. Why, that man couldn't convince a woman that she was pretty."—Cleveland Leader.

◈

Not the Alternative

"The Chinese pay all their debts on the first day of each year," remarked the man who thinks it his duty to scatter wisdom.

"I have heard so," replied the careless person. "But I'd rather be in debt all my life than be a Chinaman."—Washington Star.

A CHANCE TO DEMONSTRATE

Pa—"How were you at lifting out at college?"

Son—"Why I was champion weight lifter of my class."

Pa—"Well, now let's see you buckle down and help me lift the mortgage that I put on the old farm to send you there."

Scientific

"When I accepted Emil he declared he was in the seventh heaven."

"I believe that all right. He's been engaged six times before!"—Transatlantic Tales.

◈

Coming to It

"No, I'm not very well impressed with the house," said the prospective tenant. "The yard is frightfully small; there's hardly room for a single flower bed."

"Think so?" replied the agent. "But—er—mightn't you use folding flower beds?"—Philadelphia Press.

◈

Too Suggestive

MR. MCQUIRE (to hospital attendant)—"Phwat did ye say the doctor's name was?"

ATTENDANT—"Doctor Kilpatrick."

MR. MCQUIRE—"Thot settles it. No doctor wid thot cognomen will git a chance to operate on me—not if I know it."

ATTENDANT—"Why not?"

MR. MCQUIRE—"Well, ye see, my name is Patrick."—Judge.

◈

The Bliss of Ignorance

"You New-Yorkers don't seem to know anything about the rest of the country," said the visitor.

"The rest of the country?" echoed the New-Yorker. "Where's that?"—Philadelphia Ledger.

◈

A Pleasant Surprise

THE MILLIONAIRE—"Henri, fetch a car at once!"

THE CHAUFFEUR—"Which one, sir?"

THE MILLIONAIRE (astounded)—"You don't mean to say, Henri, you have more than one out of the repair shop?"—Exchange.

ALL HANDS BUSY

"Where's your pap?"

"Huntin' fo' a 'possum."

"Well, where's your Brother Bill?"

"Gettin' wood fo' to cook him wid."

"Well, how 'bout your ma. Is she home?"

"No, sah; she's over to de neighbor's, borrowin' a kettle to stew him in."

But What Sex is Echo?

HICKS—"Say, I've found a spot out in the Newtons where my wife can't possibly have the last word."

WICKS—"Where is it?"

HICKS—"Under Echo Bridge."—Boston Transcript.

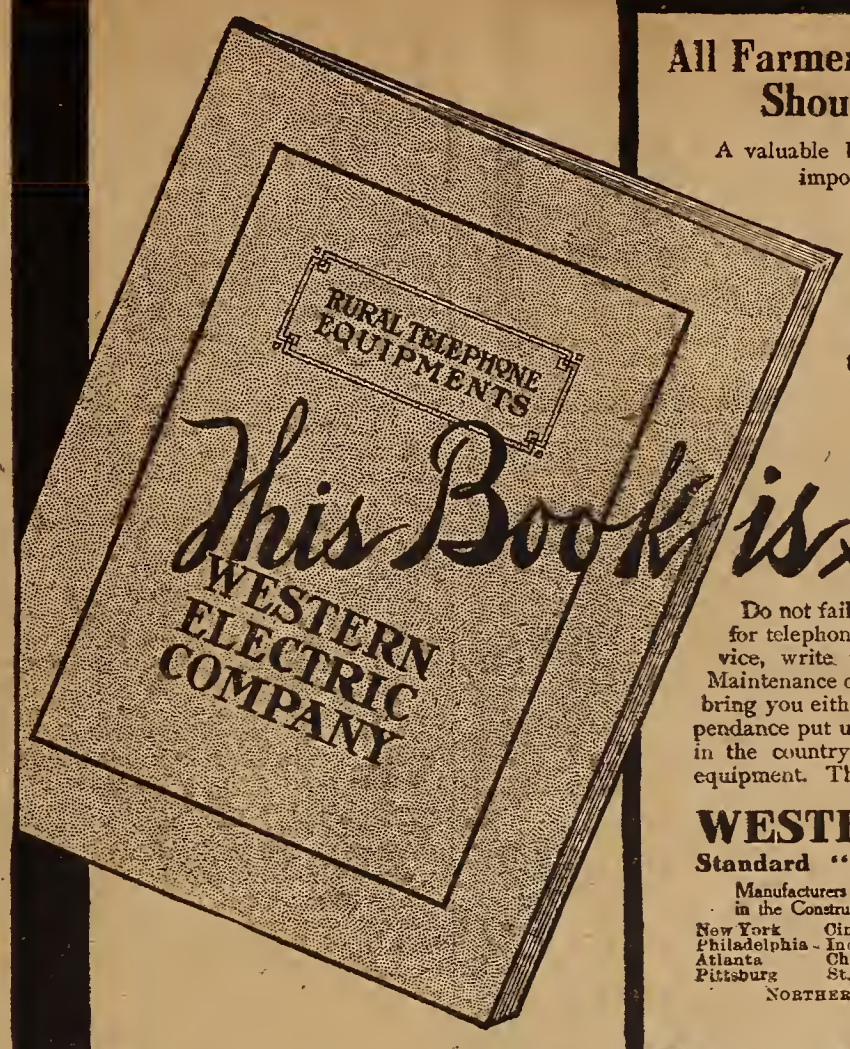
◈

MOLLY—"When you spoke to father did you tell him you had five hundred dollars in the bank?"

GEORGE—"Yes."

MOLLY—"And what did he say?"

GEORGE—"He borrowed it!"—Sketchy Bits.



All Farmers Without Telephone Service Should Write for This Book

A valuable book on the rural telephone. It shows the importance of the telephone to the country dweller; it tells how to organize a telephone operating company, and gives model constitution and by-laws; it describes telephone equipment, apparatus and construction used in rural lines; it treats of maintenance and operation; it tells what is needed for the construction of a rural line and how to estimate cost.

This Book is Sent Free

Do not fail to get this book before making arrangements for telephone service. If you already have telephone service, write for our book, "Construction, Operation and Maintenance of Telephone Lines." A postal card request will bring you either book by return mail. Nowhere is more dependance put upon the telephone after it is once installed than in the country. Rural lines need the best apparatus and equipment. The recognized best is that made and sold by the

WESTERN ELECTRIC CO.

Standard "BELL" Apparatus and Equipment

Manufacturers and Suppliers of All Apparatus and Equipment used in the Construction, Operation and Maintenance of Telephone Plants

New York	Cincinnati	Des Moines	Dallas	Seattle
Philadelphia	Indianapolis	St. Louis	Denver	San Francisco
Atlanta	Chicago	Kansas City	Salt Lake City	Los Angeles
Pittsburg	St. Paul	Omaha		

NORTHERN ELECTRIC AND MANUFACTURING CO., LTD., Montreal and Winnipeg

Use Address Nearest You

$50.00 Saved By Buying The "Money Maker"

The only Tight-Box, Endless Apron, Force-Feed, Successful Box Spreader made. Will fit any wagon. Why buy a gear when you have it? Put the "Money Maker" on your wagon gear. Can be easily done. Load it with the wettest manure, and throw it into gear. A marvel of simplicity and strength. **A boy can handle it. GUARANTEED to do the work and do it well or your money back.**

MONTGOMERY WARD & CO., Chicago and Kansas City

Buy our "Always Ready" 2 Horse Power Engine—ready to run. Send for **Special Book** quoting larger sizes; also Steam Engines, etc. **$51.00**

"How to Make Money on the Farm"

Just off the press. 300,000 copies of this circular ready for distribution. Gives particulars in a test of Manure Spreading, Reasons for Buying, etc. You must not overlook it. **Drop postal today** and get it by return mail **FREE**

53

O. K. Chase
St. Louis, Mo.

I Am the Paint Man

2 Full Gallons Free to Try—3 Months Time to Pay

You Pay No Freight to Try My Paint

I Have a new way of manufacturing and selling house paint that's unique—that's better.

Before my plan Paint was sold in two ways—either ready-made—or mixed by a local painter.

Both these ways are at fault.

Ready-Made Paint settles hard in cans—and mineral pigments and chemical acting driers in ready-made paint eat the life out of Linseed Oil—which is the LIFE of all paint.

Painter-Made Paint can never be properly made by a painter—because of lack of heavy mixing and grinding machinery.

My Paint is ready to use—but not ready-made. My Paint is made to order—after the order is received—packed in hermetically sealed cans—(extra size to insure a full gallon) and dated the day the Paint is made.

Pure Linseed Oil and pure, fresh paint ingredients are used in my Paint. Such materials, found at local stores, are usually adulterated.

I sell my Paint direct from factory to user—at very low factory prices.

I pay freight on six-gallon orders or over.

When the order of six gallons or over is received, use two full gallons to test it—and if you are not perfectly satisfied, in every particular, return the balance of the order to me—and the two gallons you have used shan't cost you a penny.

No other paintmaker offers such a liberal proposition. My Paint is sold to responsible people on three months' time, if desired. I make three brands of Paint to suit the requirements of my immense trade.

My strictly Pure All White Lead Paint is absolutely the best paint in the world. My 20-60 Brand Zinc and Lead Paint is the best paint in its class on the market. My Durability Paint has an immense sale everywhere, and is sold under five-year iron-clad guarantee. The Purity of my Paint is guaranteed under a forfeit of $100.00 in gold.

Send for my beautiful Paint Book and big Color Cards to select from—best Book—largest Cards ever published. They are FREE. With the Paint Book I send Free Book of all kinds of Painters' Supplies, sold at Direct-to-you Prices. Write TODAY. My Plan insures you Satisfaction and lowest prices on Paint.

O. L. CHASE, THE PAINTMAN, DEPT. 19, ST. LOUIS, MISSOURI

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The largest retail piano business in the world has been built up by us in the past 45 years. Let us send you free information and prices of twenty leading makes. Also new plan of easy payments. Pianos shipped everywhere. We give absolute guarantee of highest musical qualities. All prices wonderfully reasonable. *Special Bargains:* 12 second-hand Steinway Uprights, 3 Webers, 2 Lyon & Healys, 6 Washburns, rebuilt in our factory equal to new, at very low prices. Teachers and students would appreciate these instruments. *Write today.*

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LYON & HEALY

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PHONOGRAPHS

FREE CATALOG NUMBER 82.

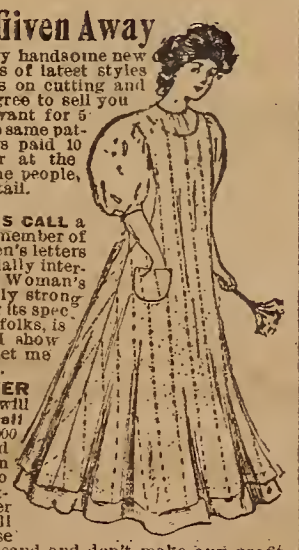
EUGENE CLINE, 57 DEARBORN STREET, CHICAGO.

The UNIVERSAL MAGAZINE the most interesting. Send 25 cents for one year's subscription and 12 beautiful pictures. Address, HALE PUBLISHING CO., 5530 Vista Avenue, St. Louis, Mo.

2941 Hidden Name, Friendship, Silk Fringe, Envelope and all other kinds of CARDS and Premium Articles. Sample Album of Finest Cards and Biggest Premium List, all for a 2 cent stamp. OHIO CARD COMPANY, CADIZ, OHIO.

20 Post Cards 10c All different. Fine views and comics. Sets as up to 5c each. All prepaid with big catalog for 10 cents. 3 lots 25c. BANNER CO., 1071 N. FAIRFIELD AVE., DEPT. 5, CHICAGO.

Fashion Book Given Away



I want to send you my handsome new book showing hundreds of latest styles with illustrated lessons on cutting and dressmaking. I will agree to sell you all the patterns you want for 5 cents each. They are the same patterns you have always paid 10 cents and 15 cents for at the stores, made by the same people, and correct in every detail.

HOW I DO IT

I publish the **FARMER'S CALL** a **weekly** paper for every member of the family. The children's letters each week are an especially interesting feature; and the Woman's Department is unusually strong and instructive. Among its special features for women folks, is its fashions in which I show the **5-cent patterns.** Let me help you to save money.

MY SPECIAL OFFER

Send me 25 cents and I will send you the **Farmer's Call every week** (over 1000 pages) **for one year** and will send my big Fashion Book to you. I also agree to sell you any pattern you want thereafter for **5 cents.** I can sell them for 5 cents because I buy them by the thousand and don't make any profit. I don't want the profit, I want your subscription to the **FARMER'S CALL.** You will save many times the cost of my offer in a year. WRITE TO-DAY!

JOHN M. STAHL, Desk K, QUINCY, ILL.

Agents Wanted

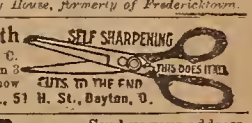
$1500 A YEAR Selling MEND-A-RIP

A Perfect Hand Sewing Machine and Riviter combined. The greatest money saver for the farmer is the greatest money maker for the agent. One agent makes $1500 annually selling these, many others doing almost as well. Write today for special price to agents and agents' guide, "The Way to Win," also catalog full of money makers.

FOOTE MFG. CO., Dept. 201 DAYTON, O.

Great Agents Supply House, formerly of Fredericktown.

Agents $103.50 per month selling these wonderful Scissors. V. C. Giebner, Columbus, O. sold 22 pairs in 3 hours, made $13; you can do it, we show how. FREE OUTFIT. F. Thomas Mfg. Co., 51 H. St., Dayton, O.



$3 a Day Sure Send us your address and we will show you how to make $3 a day absolutely sure; we furnish the work and teach you free, you work in the locality where you live. Send us your address and we will explain the business fully, remember we guarantee a clear profit of $3 for every day's work, absolutely sure. Write at once. ROYAL MANUFACTURING CO., Box 945 Detroit, Mich.

WE PAY $80 A MONTH SALARY and furnish rig and all expenses to introduce poultry and stock powders; new plan; steady work. Address SIGLER COMPANY, X400, SPRINGFIELD, ILLINOIS.

AGENTS $300 Every month selling our wonderful SEVEN PIECE KITCHEN SET. Send for sworn statement $12 daily profit. Experience unnecessary. Outfit free. F. Thomas Mfg. Co., 751 H. St. Dayton, O.

Three generations of Simpsons have made

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EDDYSTONE PRINTS

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Ask your dealer for

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Silver Greys

The reliable old "Simpson" Prints made only in Eddystone.

The beautiful designs and subdued color of these fadeless, durable fabrics appeal to women of taste.

Some designs in a new silk finish.

Standard for 65 years.

If your dealer hasn't Simpson-Eddystone Prints write us his name. We'll help him supply you. Decline substitutes and imitations.

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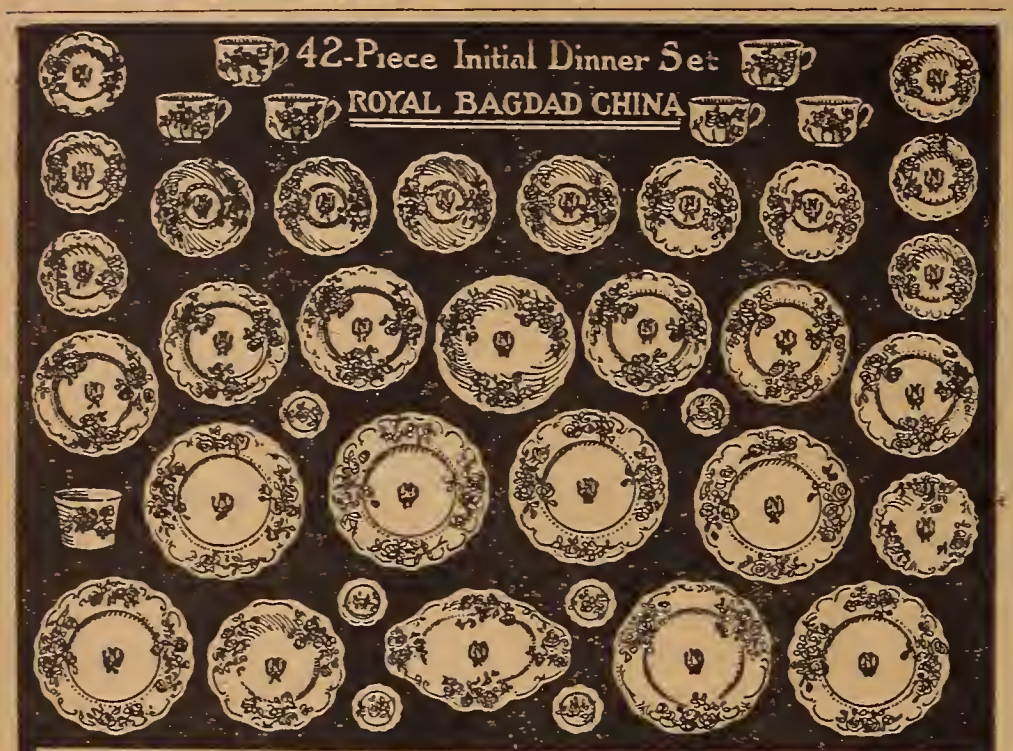
Established by Wm. Simpson, Sr.



Given This Beautiful Set of ROYAL BAGDAD DISHES With Your Own Monogram Away

The set comprises full size dishes as follows: 6 large dinner plates, 6 breakfast or pie plates, 6 dessert plates, 6 butter plates, 6 cups, 6 saucers, 1 large meat platter, 1 vegetable dish, 1 bread plate, 1 cake plate, 1 sugar holder, 1 salad or fruit bowl. The entire set is of the best quality of chinaware and is beautifully decorated with handsome design, flowers and foliage being reproduced in natural colors, and with your own monogram initial in gold. To obtain this 42-piece set of dishes, it is only necessary for you to do a little friendly work among your friends by introducing FARM LIFE into their homes. FARM LIFE is the only paper for country folks printed regularly in colors. Each issue is full of delightful stories and helpful matter. Remember there is no responsibility—no investment. All you need to do is write me and I will send you 20 of my special bargain coupons to sell at 25 cents each. When disposed of, send me the proceeds and I will ship your dishes without delay. If not satisfactory, money will be refunded.

Read this letter opposite then write me at once for the coupons. Be the first in your neighborhood to secure a set of our beautiful monogram dishes. Address:

H. H. BOWDEN, 330 Coca Cola Bldg., CHICAGO, ILL.

Dear Sir:—I received dishes all in good condition and am more than pleased with them. My friends think they are very nice and a great bargain. Also FARM LIFE is just fine, full of interesting stories and good instruction to farmers—F. L. Haney, Pittsfield, Ill.

GIVEN AWAY!

This Handsome Pony, Cart and Harness

Given Away $2000.00 In Prizes

This is a phenomenal offer. Think of being given purely as a present, and absolutely without cost, a handsome, healthy, well-bred pony, broken to harness, and gentle in manner, together with a beautiful high grade, fancy mounted harness and a strongly constructed, elegantly finished pony cart that would make many a well-to-do boy or girl rave with envy.

What a pretty picture two or three apple faced youngsters in this cart would make, and how it would gladden the hearts of old and young alike.

Don't send us any Money

Positively no pictures or any other kind of merchandise to distribute.

The pony cart is not the only prize we are giving away. There are several hundred others equally valuable prizes that would give as much enjoyment to the older members of the family. For instance: high grade, sweet toned, beautifully carved upright pianos; Edison Phonographs that play songs of our greatest singers from both abroad and at home and the most popular bands from all over the world; Handsome cut glass sets of every description, silver sets, smoking sets, watches of both gold and silver, clocks, pocket books, furniture, safety razors, rifles and in fact many things that limited space will not allow us to enumerate, besides $900 in cash prizes.

HOW YOU CAN GET A PRIZE

You can not fail to win one of these prizes. The plan is so simple and so far different from any prize contest ever before held that you will positively be astonished when we tell you about it. You take no chance whatever, nor are you required to spend one penny in the contest, either now or at any time in the future as we have absolutely no merchandise to sell nor is there any trick or scheme connected with this prize offer. The conditions are based upon a simple co-operative principle. It is only by co-operation that we are able to make this generous offer and co-operation is bound to bring both you and ourselves success.

We can not go into details of our contest in this paper, so we ask you to write us a postal, NOW—TODAY, and by return mail we will send you, all charges prepaid, complete detailed information, with descriptions and pictures of the prizes, and we will explain how our system of co-operation is sure to bring a handsome reward.

HOME CO-OPERATIVE CO., Dept. 56, Chicago, Ill.

VIRGINIA HOMES

If you are looking for an even climate, no extremes, long, pleasant summers, never a prostration or a sunstroke, short and mild winters, either to do successful general farming or raise all kinds of fruits, berries, garden truck, poultry, peanuts and cotton; so to say, the largest variety of crops, profitably, or for a change to recuperate from long, cold winters and regain health, send 10 cents for a six-months subscription to the

VIRGINIA FARMER, Box 914, EMPORIA, VA.

KEEP A LEVEL HEAD

I HAVE just written our representative in Congress again, asking him to support the parcels-post proposition of the Postmaster-General. I rather think he favors it, but I fear it stands no chance with this Congress. This is a presidential year, and Congress is afraid to do anything that it fears may cost the party a vote.

For some time I have been noting the different gatherings of the men who are trimming up the various candidates, and every last one of them is an office holder, or wants to be. In every locality there are men who are chronic candidates for office, and these are the men who are consulted in the matter of party policy.

In the platforms of the candidates who will make the race the farmer will be pointed to as "the bulwark of the nation, etc., etc.," by the very men who are now refusing to listen to any proposition that will benefit him, like the parcels post.

I have always contended that it is not a good idea for a man to forsake the party he has always been identified with, unless that party persists in ignoring what is plainly for the best interests of a large majority of the people, or puts up men for office that no self-respecting man can vote for. Then it is best for one to place his vote right without any noise or argument. Let the silent vote put in the best men and support the best measures.

Above all things, the farmer should not neglect his business, his home or his family because this is a presidential year. He can get the real issues of the time from a good non-partizan paper far better than from the campaign orators who are paid to go about the country ranting about the imaginary evils that will befall the country unless their particular party is given charge of the country's affairs. Keep a level head, and don't condemn any man, or worship any.

GET OUT OF THE RUT!

Replying to R. A., of Kentucky, I would not worry one moment over the tobacco troubles. Tobacco is not the only crop one can grow that will bring in good money. If I lived in his district I would drop tobacco growing quickly, and for good. I would turn my attention to corn and pork, and I would work to grow the largest crops of corn that the soil would produce, and breed up the best quality of hogs I could to grow and fatten on the corn.

Too often the farmers of a section of the country drop into a rut, and imagine they cannot get out. There was a time when wheat was considered the only money crop in this locality. Every farmer put the greater part of his land in wheat, and grew just a little corn for feed, and oats as a means of fitting the land for wheat. When the wheat crop failed, as it did occasionally, farmers were distressed, and constables' sales were numerous. The more progressive farmers turned to corn, clover and hogs, with wheat as a little side line; then they began to put money in the banks, and constables' sales became entirely unknown.

Splendid crops of corn can be grown in the tobacco sections of Kentucky, and there is no reason under the sun why that state should not become one of the main food-producing states in the Union.

I would advise R. A. and all of his neighbors to quit growing a debasing luxury, and to grow good food instead. Nobody will burn a man's corn, or destroy his hogs. No one will try to make him stop producing these staple articles of food. Both can be produced at a good profit, and with the improved corn-growing machinery we now have, with less labor than tobacco.

THE NEIGHBOR'S GARDEN

W. E. N., a Virginia farmer, asks me a question that many others at different times have asked. He says he has a neighbor who invariably has a most excellent garden, while he has one only in especially favorable seasons. His neighbor is governed in his planting and in most other gardening operations by the moon's phases, while he does his gardening when he gets ready, regardless of what the moon is doing. Now he asks me if I think the moon has any influence over vegetation; if I think it makes any difference whether potatoes and peas are planted during the waxing or waning of that orb.

I want to tell this subscriber that he has me. I do not know. We all know that the moon has considerable influence on the tides of the ocean, but whether it has any on vegetation we are not sure. Scientific men say that it has not. In making my garden I have never paid any attention to the moon, but I have paid a good deal to the soil. If I had it well fertilized, and properly prepared for the seed, I always felt reasonably sure of a good crop, and rarely have I been disappointed.

I feel quite satisfied that this neighbor does not neglect anything in the matter of fertilization and preparation, even if he does "plant according to the moon." I believe it was Cromwell who once told his soldiers to trust in the Lord, but to keep their powder dry. That may be the way with this neighbor. He trusts in the moon, but never forgets to fertilize and properly prepare his soil. I would suggest that this farmer investigate his methods along practical lines. How does he fertilize? How does he prepare his soil for the planting? What varieties of vegetables succeed best with him? How does he cultivate? Look into these matters closely, then do as he does, except in being governed by the moon. See how this works. I will venture the opinion that your garden will be, in every respect, as good as his. FRED GRUNDY.

EXAGGERATED REPORTS

Perhaps there is nothing that has a stronger tendency to bring the agricultural press into disrepute than the disposition upon the part of some writers to exaggerate reports.

The writer may be honest and think he is reporting facts. The exaggeration may be the result of defective judgment, or else it may be the intention of the writer in some instances to deceive. No matter what the object of the writer, the influence tends to bring the agricultural press into disrepute.

Some time ago I read a report of a yield of more than thirty-five tons of silage corn to the acre, which is very hard to believe, especially when we consider that Doctor Hunt gives ten to twelve tons as a good yield. Many readers no doubt would say simply that the report was not true.

Only a few weeks ago I read of a two-year-old Poland China hog weighing one thousand four hundred and sixty pounds, which is another report that looks as if the weight was estimated rather than weighed. One thousand four hundred and sixty pounds for a two-year-old hog means an average growth of two pounds a day for two years. I feel safe in saying that for several months at best the pig could not eat enough to make him grow two pounds a day, and this would make it necessary for the hog to increase more than two pounds a day for a part of his life.

A. J. LEGG.

TILE-DRAIN OUTLETS

Farmers who have their tile drains emptying into open ditches and creeks have much trouble in keeping the outlets in good condition.

Dig back several feet into the bank along the drain, and if the tiles are not substantial, substitute new, well-burned tiles. Then secure a sack of cement, at a cost of forty cents, a small load of sharp sand, and a boatload of small stones from the fields or creek bed.

In a mortar box mix one bucket of cement and four buckets of sand until the mixture is of one color, then moisten with water and mix into a thin concrete. Fill in about the tiles with a small amount of the stones, and dump in the concrete, tamping down well.

Continue this process until the cavity is well filled in and you are sure that a good job is done, then trowel off the surface next the bank, and you will have an outlet that will not give you further trouble from the washing of waters.

A few small iron rods placed over the front of the tiles and cemented in well while doing the work will prevent the pesky muskrat and rabbit from burrowing into the tiles and stopping up the drains.

GEO. W. BROWN.

A REFORESTER

The blue jay is one of the greatest helpers in reforesting our country with the hard woods, such as oaks, hickories and chestnuts. I have noticed that he is busy every day in autumn carrying the nuts from the hard-wood forests to the pine forests, and hiding them away under the barks and in crotches of the limbs of pine trees.

He is not able to eat the nuts of the hickory; I do not know whether he eats the other nuts, but it is my opinion that he works for the pleasure of working, and is therefore a provision of Nature for renewing hard-wood forests. If people were satisfied to cut off the pine and leave the land alone, we would soon have fine young forests of hard woods coming on to replace those cut down; but the people want some more cleared land to half farm, so they burn off the pine forests, cultivate two or three years, and turn out to grass. WM. E. RECTOR.

PITHY POINTS

If life doesn't seem one grand, sweet song to thee,
It's because you're singing it off the key.

A few things have been lacking for months, so now, while the matter is on the mind and the money in the pocket, let us act. W. J. B.

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FARMER FORSYTHE AT THE BREAKFAST TABLE

HE DISCUSSES GOOD ROADS

"This 'Good Roads' problem has been receiving a good deal of notice here lately," began Farmer Forsythe, "and I am mighty glad of it."

"I've been reading up on this question, too," interrupted Wetmore, "and I'm of the opinion that our roads are just about as good as they ought to be."

"What are your views, then, Wetmore?"

"Simply this, that our roads are good the biggest part of the year, and dirt roads, when they are good in summer, are very good. Well, that's the time to do all your hauling. When the roads are bad, don't use them much."

"That's a poor argument, Wetmore, and I am surprised that you'd bring it up. It's a fact that millions might be saved by good roads—roads that are good all the year round. Now, you can haul an average load of thirty bushels of corn from Pleasant Pastures to town, which is two and a half miles away—that is, when the road is bad, which it generally is. Basing the labor of man and team at two dollars and fifty cents, it would make the cost two and seven ninths cents a bushel. But if the roads were good, the same team could make four trips in the same time with fifty bushels a load, at the reduced cost of one and one fourth cents a bushel. So you see, money and time spent in making good roads is a fine investment."

"Did you figure that out yourself, or did you read it somewhere?"

"That doesn't matter, Wetmore, how I got the figures. If you think I got them from some of our farm papers, you ought to read as much as I do so you can keep up with me. If you think I made a mistake in the figures, suppose you try it yourself. What is mathematical knowledge good for to a farmer if he can't figure out matters of that kind?

"No, thank you, mother, I won't take but one cup this morning.

"Good roads were being agitated as far back as the Roman empire, when the famous Apian Way was built. Us farmers can't advance at automobile speed on poor roads. I don't think it's up to us farmers, though, to do it all, as the cities receive as much of the benefit as we do—in fact, I fear that if these automobiles keep scooting through here we'll have to have a double track, one going and one coming, so as to avoid wrecks—so there ought to be a state tax, making everybody pay alike. But for the present I want us to do all we can. That place about a quarter of a mile down the road ought to be fixed. It's by our farm. I have decided that we'll go down there this morning and fix it up on our own hook. Maybe some of our neighbors will take the hint and follow suit. I am anxious to have the road that passes by Pleasant Pastures, in a sense reflect the neatness and the spirit of the place."

W. J. BURTSCHER.

AGRICULTURAL NEWS-NOTES

Alfalfa thrives well in Peru at an elevation of 7,600 feet.

Minnesota now has over seven hundred co-operative creameries.

Butler County, in southeastern Kansas, leads all others in the production of Kafir corn.

The Borden Condensed Milk companies have decided to use milk from ensilage-fed cattle.

In Italy, where denatured alcohol is largely used for cooking, the usual price is eleven cents a quart.

At San Francisco, California, alfalfa hay when ground into meal sells for five dollars a ton less than wheat bran.

The great poultry states are Iowa, Illinois, Missouri and Ohio. Next in order are Pennsylvania, New York, Kansas, Indiana and Texas.

The farmers of Kansas are to be congratulated on the unanimous re-election of Hon. F. D. Coburn as Secretary of the State Board of Agriculture.

Greene County, Ohio, has a "Corn Improvement Association," at the meetings of which corn talks of five to ten minutes' duration by corn growers are in order.

The cultivation of watercress in England is on the increase. One firm alone paid out during the year 1907 about ten thousand dollars in wages for labor.

As long as the United States Department of Agriculture "does things" that lead to more profitable farming, faith in its up-to-date methods will remain undiminished. *

◈

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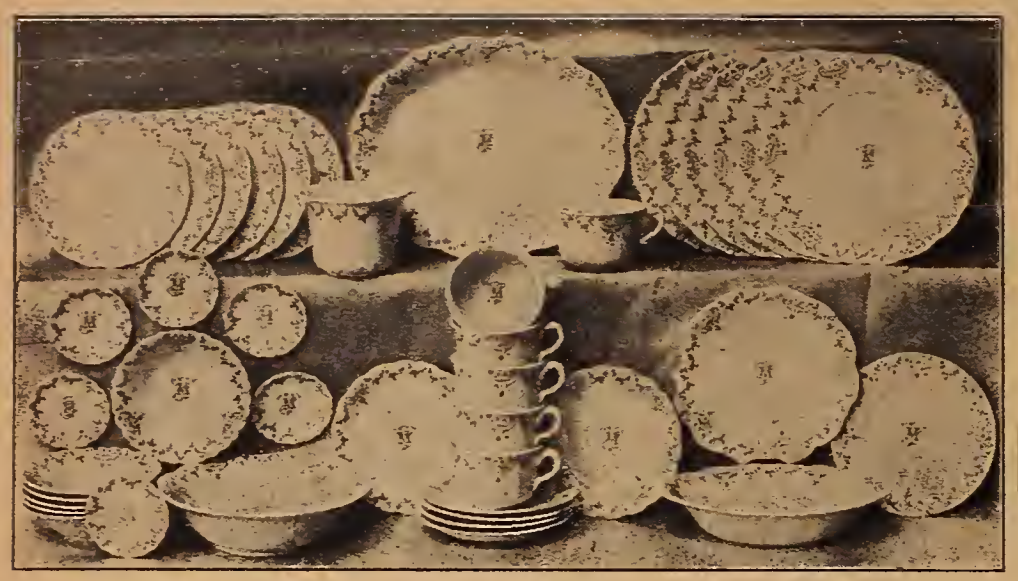

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Merchandise Payment Department

FARM AND FIRESIDE

SPRINGFIELD, OHIO

CLEARING LAND WITH HOGS OR SHEEP

A Pennsylvania man writes: "I have five hundred acres of mountain land, now covered with natural wild grass, white clover, ferns, scrub oak and small chestnut trees growing in bunches about six feet high. The land is sandy and clay loam.

"Would it be practical to fence this land in ten or twenty acre fields and put sheep or hogs on for grazing and clearing purposes? If placed on in the spring, would the animals be self-sustaining during the summer months?

"How many sheep or hogs would ten acres accommodate? At what age would it be best to have them before turning out? Would it be better to buy young pigs in spring, or buy sows and breed during winter, to turn on the land when the weather permits?"

The writer suggests a perfectly feasible treatment for this land. Either hogs or sheep will help to clear such land, but neither will do it alone. I remember one rocky pasture in Rhode Island which was cleared of brush at comparatively small expense by cutting off the brush and pasturing heavily with sheep. After the smaller stuff has been cleaned out by the animals, the larger brush can be cut, and then, as these throw up new sprouts, they are likely to be eaten.

Either class of animals should be self-sustaining on such land during the summer season, but sows while nursing their young would need some grain. To rear a large litter of strong, healthy pigs imposes a heavy task on the sow. The older they grow, the more they are able to care for themselves, but I should hardly expect a pig under ten or twelve weeks old to make satisfactory growth on pasture alone. With a little grain to start them off they can do without their mother's aid at an earlier age.

The number of animals which ten acres will carry will depend so much on the nature of the land that little help can be given. Perhaps five brood sows with their young would be enough for ten acres of such land. Ten acres of alfalfa pasture will carry twenty or thirty and still allow some hay to be cut. With sheep particularly—perhaps also with hogs—it would be wise to shift them from one field to another every few weeks. A flock of twenty-five ewes and their lambs might be used on two or three such fields. Much will depend upon whether the primary object is to clear the land or to supply pasture for the stock. If clearing the land is of first importance, much better results can be obtained by overstocking and supplying some supplementary feed. A drove of hogs confined in a small lot will root up and help to subdue the most obstinate brush land, but the hogs cannot support themselves in so doing.

A beginning can be more cheaply made by buying sows already bred to farrow in spring, though it will probably be better eventually to breed them. A sow can be wintered cheaply and kept in excellent condition on beets or turnips. They will demand attention and warm, dry quarters at farrowing time, or there will be much loss of pigs. This is equally true of sheep.

This man is a physician, and doubtless must depend upon others to look after the details of such an undertaking. Our advice to him is to go slow. Try one or two fields at first, and learn by experience whether the plan meets his expectations.

If hogs are used, an active breed should be chosen—one well adapted to foraging.

Fred W. Card.

THE HOME GARDEN

I am glad to see that increasing numbers of farmers are determined to have good home gardens. One who heretofore had paid very little attention to gardening said to me a few days ago, "I don't see why I should not have as well-grown and well-flavored vegetables on my table as I have seen on the tables of high-class hotels. I gave three dollars for two meals at a good hotel last fall, and they had vegetables of very fine quality on the table at each meal. It struck me that I could have just as good on my table if I would give more attention to my garden.

"But I should have kicked if my wife had asked for even two dollars' worth of seed and plants. Then I just plowed and harrowed the ground, and left it for her to work down and plant, and she hoed the crops. I have seen the foolishness of it. Three dollars for only two good meals has opened my eyes. This year I will do less field work and grow more good food for our table. I will take the burden off my wife's shoulders and do the gardening myself, and see if I can't raise stuff to be proud of.

"Billy and Sam were with me at the same hotel, and we talked the matter all over, and we decided we had been losing out badly—that is, neglecting our opportunities, and living on third-rate stuff, when we should have had the best the soil would produce. We are entitled to it. We have all been ready to rear up and howl if we thought our political rights were abridged, or if we thought the trusts and millionaires were beating us out of a few dimes, but we thought nothing of living on a few common, tough, stringy vegetables, while the city man lived on the best that grew, and regarded us as peasants and soil grubbers. We, too, are going to have some of the good things that grow, thank you!"

HOW PREVENT WASHING ON HILLSIDES

Not long ago I received a letter from a man, who says he is now eighty-two years of age, but still in the ranks of the workers. He writes:

"People say I am eighty years old, but it seems to me I am eighty years young, and I am still planning, and also working, but not, of course, like a young man. Twenty-three years ago I read an article of yours in the old 'Examiner,' about preventing the washing and gullying of hillsides and ravines. I had one hillside that washed badly every year, and several little ravines that were cutting out deep enough to bury a horse. I took your advice and got the hillside in grass, and have kept it so ever since. I do not allow stock to graze it too closely, and it has not washed a particle. The ravines I planted with various kinds of trees and shrubs, as you advised, and for years they have been what my little granddaughter calls 'perfect little wildwoods.' When I have the fields, where they are, in pasture they make splendid shelter places for the cows, and all the washing out of soil has been stopped." F. G.

THE HOUSE SPARROW

The destruction of the sparrow and reinstatement of the martin and other birds is not all sentiment with me, but a question of economic importance as well. While we ask state and national assistance, we must show that we are trying to help ourselves. Many do not know how. City people must be taught that harboring and feeding the sparrow reacts upon them, for cities and towns are the breeding places of this bird, which directly and indirectly places a tariff upon everything they buy from the farmers.

By killing the few sparrows in winter which remain around our barn yards we could soon rid our farms of them, but it is discouraging to know that those which have migrated to the cities to be fed will return with their brood in the spring. If city councilmen would place a tax upon every nest found, we would not have so many to shoot in the spring, nor hear them say, "It's a shame to destroy the only bird that is left!"

Mr. McMillen in Farm and Fireside of December 25th seems to hint that nothing new can be said on this subject. Well, we should keep before the public what is old. Demosthenes preached to the Romans the destruction of Carthage until it was destroyed.

A. T. Goldsborough.

EXPERIMENTING

If farmers would spend some time experimenting in a small way with new crops and with new varieties, rather than investing largely in new, untried varieties, it would save many losses and disappointments.

Most seed catalogues bring out new varieties each year which are advertised as novelties, but are recommended as being very much superior to anything heretofore introduced. These new varieties may really be something valuable in localities to which they are adapted, but the probabilities are that there will be more failures than successes with them, since they will be planted in many instances on soils to which they are not adapted, and climatic conditions will not be favorable in many places.

The safer plan is to plant new, untried crops in an experimental way at first. This will show whether they are suited to our particular conditions and requirements. If the trial proves a failure, there is not much loss; but if, on the other hand, any new crop or new variety shows superior qualities over others, there is time enough to invest more largely another year.

I have secured some desirable new varieties from my trial plots, while there have been many failures of highly recommended varieties to show the excellent qualities attributed to them. They may have succeeded with others under different conditions, but if I had relied upon some new varieties that have been highly recommended the result would have been serious loss. A. J. Legg.

There is no more profitable way of spending your spare time than getting subscriptions to Farm and Fireside.

WHAT IT SAVED

"I KNEW it would save something, but I had no idea it would save so much. It was the best investment I ever made in the line of farm tools."

The first haze of spring was lying over the valley. Neighbor and I sat on the stone wall looking down on the pretty country scene stretched out below. Laddie was rustling about in search of the rabbit we had seen scampering along the fence a moment before. But he had his ears open. Boys never get too busy to know about all that is going on within ear and eye shot.

"Things will break; you know that. And especially when there is a little frost in them chains they will snap just at the time when you feel it the worst. We had a big log to get out of the woods, and wanted to do it before the snow went off. We had to snake it as far as from here to that maple tree yonder. Then we would come to the skidway, where we could load it on the bobs.

"There had been a sharp frost the night before. The chains had been out since the week previous, and the first jump the horses made after we got the chain 'round the log with a rolling hitch, snap went a link. Well, that was a disappointment. Five miles to the nearest shop and maybe an hour or two to wait after that before we could get our job done. That made it rather discouraging about getting our log out that day.

"But, sir, just then Ned piped up, 'Say, pa, I'll bet I could mend that chain! I've been tinkering with the new forge and things, and I'd just like to try it. You wouldn't want to let me, would you?'

"Well, sir, the boy's voice had such a good ring that I just made up my mind that here was a chance to give the little shop a practical turn. We had both of us been fussing at different things with the tools. Hadn't had 'em very long, you know, and the very newness of the things made them interesting to us. So I sung out to the hired man to unhitch the horses and go back to the barn with the chain. Then I told Laddie, 'You may skip down and build a fire in the forge, and we'll see how good a blacksmith you are!' That was enough. You could see the bottoms of his feet every step after that till he got to the shop. We put up that little building there, you know, just for the shop. Makes a handy place to fuss away at things on rainy days.

"It wasn't an hour before Laddie had that chain welded as nice as you please. I was surprised. He handled the tools first rate. Made him sweat some, for it was new business, and he was all the time thinking that the hired man and I were watching him. That made him a little more nervous. If you ever tried it, you know that welding a chain link is pretty difficult business. Just when you think you have the links in the right shape and ready to weld, away they will slip, and you have to begin all over. But he stuck to it till he got it all nice. We went back and got our log out and off to the mill that day, after all."

"Splendid! Score one for Laddie!" I could not help exclaiming.

"But say, that wasn't the best of it. The knowledge that he could do something that was really worth while was what counted with the boy. Why, he stepped high for a week after that, and I was proud of him myself. When a boy gets so that he feels that he is of some account on the farm, it is a big day for him. Welding a piece of iron is a good thing, but bringing out what there is in a boy is worth ten times more. And that is what such jobs do for a boy."

There was so much in that, that we sat there and thought it over for half an hour.

Sometimes farm boys are not considered of much account on the farm. They have little to do that is actually valuable. They are sent on little errands, of course; it seems as if some fathers think that is about all they are good for. But it is a great day when the boy is given something really worth doing. Can we not all think back to the time when we came up to the place where we could be trusted with the farm team, or strong enough and trusty enough to go out and do a piece of mowing with the machine?

But that shop down there is a thing worth more than a passing notice. Stop a moment and look at it. The day when that boy proved that he could weld a broken chain link so that it would hold was one of the greatest in all his life. It showed that he was a man in ability to do things, if not in stature.

And from that day on it gave him a standing on the farm and in the neighborhood that he never had had before. Do you suppose there is a lad in all the community that does not know to-day that Laddie fixed the log chain, and did it so well that the big farm team could not break it? If you do, you have a different idea about boys than I have. Why, the news of that achievement must have gone on the wings of the wind. And before long other boys were trying to do the same thing and other things to match it.

Just here comes in the value of the farm workshop. It costs a little money to fit up such a shop. And yet who can estimate its value in the farm economy? To say nothing of the money and time saved in mending the different farm tools from time to time, the value as an educational force can hardly be estimated.

Laddie gained in skill as a workman that day. He had little skill naturally, no more than most other farm boys. He did not know just what was in him until he tried, and that brought out what might otherwise never have been developed.

And then, the forge and the things that go with it helped to rivet a better chain than that which drew the heavy log out of the woods that day; it welded more firmly than ever before the chain which bound Laddie to the farm home. It took him out of the ranks of a chore boy and made him a real helper, to be depended upon when trouble comes.

These are things worth thinking about, fellow-farmers. EDGAR L. VINCENT.

◈

THINK ABOUT IT

A farmer writes me that he has a mean, very mean, neighbor who permits his stock to run at large on the highway adjoining his farm and yards, and his animals reach over his fences and eat everything that grows near them, and fight his animals over his yard fences, causing them to break wires and boards, while his little pigs creep through gates and other places and root up his garden, and so on.

One who lives near such people is unfortunate, to say the least. This man says his neighbor is also belligerent, and constantly carries a chip on his shoulder, and has intimated that he will knock the face off this complainant if he touches any animal of his. This is the usual accompaniment of the disposition to allow stock to injure a neighbor.

There are three courses open to this complainant. He may invoke the law and have it out with the party to the bitter end. He may adjust his fences and arrange his planting so that no stock of any kind can do him any injury. He may call in a man who is a friend of the troublesome neighbor, lay the matter before him, and offer to do everything that is right and fair in the matter; then the two can go over and have a quiet talk, and come to some sort of an agreement.

It may be that the complainant is not altogether blameless himself. Study this thing over and see. Not often will a man persist in wrong doing when he knows that his neighbor is trying to treat him fairly. He may be neglectful, but he will not seek opportunities to annoy.

One must overlook the neglect and provide against it. All things have an ending, troubles and annoyances as well as joys, and the one who pursues the even tenor of his way, dealing with his fellow-mortals fairly and squarely, is sure to win the respect of all, and to have very little, if any, trouble with them. It sometimes requires a good deal of grit and firmness to keep one's mouth shut when unjustly accused or annoyed, but we can all rest assured that if we do we will never have anything to regret. In all the world there is nothing like a "square deal," which is simply applying the old Golden Rule, in all things.

One of the quietest little men I ever knew happened to buy a farm in a locality where the people were constantly scrapping with each other, and they immediately set about annoying him in many ways. He said not a word, but they always found him ready to do a neighborly act or accommodate in any way possible. In a short time he won the respect of the entire neighborhood, and though he was occasionally subjected to irritating annoyances, he remained silent. His example had a marked influence on his neighbors, and in a few years the scrapping ceased and it became an excellent community in which to live. Our complainant may find an idea to think about here.

FRED GRUNDY.

◈

KEEP AN ACCOUNT

Every farmer should keep a set of books, the same as any other business man. It is impossible to conduct a farm on business principles without doing so. The farmer as well as the merchant should keep an accurate account of every cent paid out and every cent taken in. Then he will know just what he is making and which work is profitable and which unprofitable.

At the end of each year study the past year's books in a thorough manner. Some expenses may be eliminated and some improvements made in the method of running the farm the coming year that never would have been thought of had no accounts been kept.

GILBERT ALLEN.

◈

All the advertisers in FARM AND FIRESIDE are reliable. We investigated pretty thoroughly before admitting them. You can trade with them without any risk.

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The man who has his buildings covered by REX Flintkote ROOFING can feel that "all is well." The contents of his buildings are protected by roofs through which water cannot penetrate; that winds cannot blow off, that falling sparks cannot ignite. Furthermore, he has *lasting* protection, for

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A PRIZE FOR YOU

TWO BEAUTIFULL FULL SIZE 16x20 PICTURES AND A PACKAGE OF TEN HANDSOMELY COLORED POST CARDS GIVEN FREE TO ALL ANSWERING THIS ADVERTISEMENT IN GOOD FAITH. WRITE TO-DAY.

Wouldn't you like a PRIZE of these handsome, elegant, attractive set of dishes? Of course you would. The set consists of 42 pieces embellished with YOUR INITIAL IN PURE GOLD, making the whole set the pride and joy of every housekeeper fortunate enough to possess it.

YOU CAN WIN THIS PRIZE AND IT WON'T COST YOU A CENT TO GET IT. We are giving these dishes away and this advertisement tells you exactly how you can obtain them without money and without price. Think how nice to have this dinner set in your china closet! Think how *proud* you can feel to have them on your table when company comes!

SPLENDID PRIZE! THIS 42-PIECE, GOLD MONOGRAM DINNER SET CAN BE YOURS IF YOU ACT UPON THIS OFFER PROMPTLY.

This set is just as shown in the illustration. This daintily decorated, embellished, gold initial dinner set, elaborately decorated with wild roses with green leaves and foliage, *every piece trimmed with coin gold*, the next thing to Haviland china, which is owned by multi-millionaires, equal to a set costing many dollars in your local stores—this **PRIZE PREMIUM** is **YOURS** for a little of your leisure time. Your initial in *gold* is put on as shown above. This dinner set will be the pride of your home and you can **WIN** it without going outside of your house to do it.

AN EXTRA PRESENT FOR PROMPTNESS. Act promptly upon this offer and **WIN ANOTHER PRIZE** of a beautiful 8-piece **SILVER PLATED TEA SET**—consisting of six teaspoons, a sugar shell and a butter knife, handsomely plated with coin silver.

You can easily win **BOTH** of these valuable prizes. One lady writes: "I am very much pleased with my prize set. It is very much better than I ever expected to get. Any one can see for themselves by looking at the set I received that there are no cheap articles put out by you."

Another lady writes: "Received prize set O. K. Am very much pleased with it. It is much nicer than I thought it would be. I thank you very much. I am going to earn another set."

BY MY PLAN ANY ONE CAN SECURE BOTH THESE BEAUTIFUL PRIZES JUST LIKE THESE LADIES DID.

HOW TO GET THESE PRIZES

Just fill in carefully the coupon below and send it to me, and I will take pleasure in writing you just what to do. I have such a *splendid, liberal* proposition to make to you that I know you will be delighted to have a chance to get an elegant, beautifully decorated **42 PIECE GOLD MONOGRAM DINNER SET** and the handsome tea set plated with Coin Silver, when you see how easily it can be done.

BEAR IN MIND these two Prizes are given away. Don't forget that we give *Two Grand Prize Premiums* instead of one, and that as soon as we get the coupon we send you Two beautiful, richly colored **PICTURES** and a set of **ARTISTIC COLORED POST CARDS** absolutely free. Don't delay. Write at once. Address

M. A. JOHNSON, Mgr., Warren, Pa.

FREE COUPON

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Dear Sir:—I would like to secure a 42 piece Gold Monogram Dinner Set and a handsome silver plated 8 piece Tea Set. Please send me full particulars.

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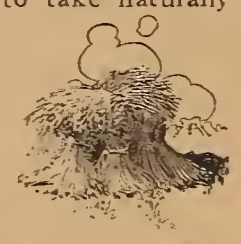
Address.....DEPT. 120.

Bumper Crops on $15 Land in the Texas Pan Handle

You'd be surprised to see what those Pan Handle fellows in Northern Texas, Western Oklahoma and Eastern New Mexico raise on their ten and fifteen dollar land.

'Tisn't anything for them to get 40 or 50 bushels of corn to the acre. Wheat makes about 20 to 30 bushels and they calculate on gettin' 60 to 80 bushels of oats right along. Alfalfa just seems to take naturally to the country. They get 2 to 2½ tons to a cutting on each acre, and they cut three, and some of them four, times a year. 'Tisn't like it is up North, you know. They don't have long winters to freeze everything up and keep it frozen all winter.



Wheat 20 to 30 Bushels.

You never saw a finer looking lot of fellows in your life — strong, healthy, husky. It's the climate that makes them so — the healthiest climate you ever saw.

There are 85 steam plows down there now — cutting up ground at the rate of 20 acres a day. That's the way they do things down in the Pan Handle.

Corn 40 to 50 Bushels.

You can settle most anywhere in the Pan Handle and be near a good school and church. There are a dozen towns with water works, electric lights, libraries, banks and some of them are figuring on street cars. Think of the good chocolate loam 5 to 8 feet deep, with clay subsoil and plenty of water only 25 to 50 feet down, all ready for the plow, selling for $10 to $15 an acre.

Honest, now, are you getting on as well as the Pan Handle farmer? I'll allow, for the sake of argument, that you've got 80 acres and they cost you $50 an acre — that's $4,000. The Pan Handle farmer can get 400 acres for the same money and will raise just as much to the acre as you can. Looks to me like he's got about 5 times the best of you. Don't you see he has?

Why don't you go down to the Pan Handle and do the same? It would pay you to take a trip down there, just to look around.

Alfalfa, 2 to 2 1-2 Tons, 3 Cuttings.

It doesn't cost much—only $20 from St. Louis or Kansas City and $25 from Chicago, round trip. The Rock Island-Frisco lines have four routes to the Pan Handle. Each one goes through a different part of the country.

I have got a book about Texas that's mighty interesting reading! Another about Oklahoma! Still another about New Mexico! They will tell you a lot you want to know about the Pan Handle Country before you go down there. Do you want one?

The Rock Island-Frisco Lines have no land for sale, and are only interested in getting good, energetic settlers for the desirable, but unoccupied, lands along their lines.

I have chosen several specific sections where conditions are especially favorable for new settlers, and I am advertising these sections. If you would prefer some other section than the Pan Handle country look for my advertisements in other issues of this paper, or write me for specific literature about the section you are most interested in.

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St. Louis, Mo.

HOW TO AVOID BREAK-DOWNS AND DELAYS AT HARVEST TIME

Every break-down at harvest time means time lost.

Every minute lost may mean grain lost.

Every bit of grain lost means profit lost.

You cannot afford to take chances on break-downs and delays with harvesting machines built of **doubtful materials.**

You don't have to.

Because the International Harvester Company has bought mines to get the best ore—built its own mills to produce the best iron and steel, bought timber lands and built its own saw mills—to give you material in your harvesting machines that you can **always** depend upon.

An individual manufacturing concern could not afford to take such precautions to protect you against poor materials, but the manufacturers of the

Champion, McCormick, Osborne,
Deering, Milwaukee, Plano,
Harvesting Machines

save you many dollars by putting always-dependable material into their machines.

The modern harvester is essentially a structure of iron and steel, and even as far back as the Mexican War time, the founder of one of the Company's plants, with only one factory turning out his machines, was compelled to join with two other manufacturers, in the erection of their own iron foundry so that they could give the farmers machines built of good iron.

Today, in order to give you the best materials in your harvesting machines at the lowest possible prices, the International Harvester Company is compelled to own, in addition to its fourteen complete manufacturing plants:

—22,459 acres of coking coal lands in Kentucky

—100,000 acres of trees in Arkansas, Mississippi and Missouri, with a twelve-mile canal system, logging railroads, saw mills and other buildings

—40,000,000 tons of ore in Wisconsin and in the Mesaba Range with six standard gauge locomotives and steam shovels that strip the surface and heap a fifty-ton railroad car in ten swings

—a complete 93-acre steel plant with three blast furnaces, Bessemer steel mill, Blooming mill and Merchant bar mills, having a capacity of 500,000 tons of steel and 360,000 tons of iron every year.

The consumption of every natural product of the country is so far in excess of the supply that the cost of raw material is increasing annually, but by owning these properties and purchasing all other supplies in large quantities, this Company secures every advantage of highest quality and lowest price.

Every bit of material—wood, steel, iron, malleables, paint, etc., is subjected to the most rigid tests in special testing departments before being used, so the farmer buying an International machine may be sure that the material is **always the best.**

Only large capital and a strong organization make these advantages possible, because an individual manufacturer would be compelled to take what he could get and pay whatever price was demanded.

In shipping, as well, the magnitude of this Company's operations insures a great saving of cost.

Steel, iron and lumber are shipped to the various plants in train-loads, while copper, rivets, tacks, buckles, canvas, etc., are received in carloads.

In July, 1907, the lumber yards at one of the plants contained 56,500,000 feet of lumber of the following woods: Ash, birch, bass-wood, cypress, cotton-wood, fir, gum, hemlock, hickory, locust, maple, oak, pine, pecan, poplar, elm, spruce, sycamore and yellow pine.

About seventy-five per cent of the lumber is air-dried, which insures a very tough material.

These are but a few of the many advantages which mean the best quality in every International machine you buy.

The several plants have also been able to improve the principles of construction, to improve workmanship, and to employ every means that will increase the machines' efficiency and durability.

You get the benefit in the end.

Call on the International dealer and get a catalog.

If you don't know an International dealer write us, and we will be glad to give you the address of the one nearest to you.

Equal in importance with a perfect machine is perfect twine. The most perfect twine made may be had in Champion, McCormick, Osborne, Deering, Milwaukee, and Plano, sisal, standard, manila and pure manila brands.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(INCORPORATED)
Chicago, U. S. A.

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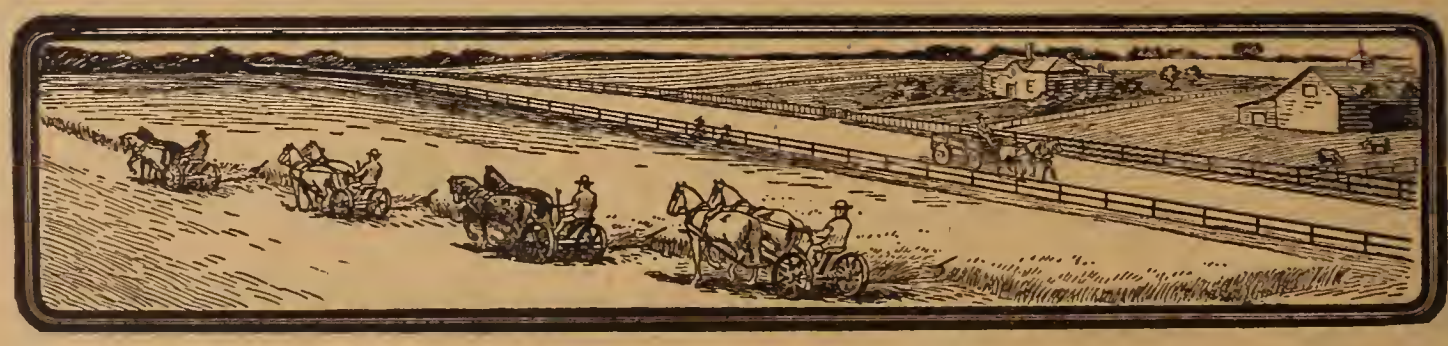

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